PRINTRONIX®

Operator's Guide

The Printronix L5520 Multifunction Printer

Consumables Information

Printronix® has years of experience designing printer imaging systems. For the best possible performance of your Printronix printer, always use Genuine Printronix parts and consumables.

For the name of your nearest Printronix full service distributor, call:

United States (800) 733-1900 or (714) 368-2300

Europe (33) 1-46-25-1900

Singapore (65) 548-4116

Consumable Item	Part Number	Replacement Interval (in Pages)[1]
Toner cartridge	703532-001	21,000
Waste toner bottle	202984-001	150,000
Photoreceptor drum	703535-001	150 - 300,000 See Note 2
Developer	703548-001	150,000
Developing Unit	705739-001	600,000

Note 1: Varies with paper size, media type, and toner coverage.
Note 2: Inspect every 150,000 pages; clean if needed. Replace at 300,000 pages or sooner of print quality is no longer acceptable. Drum life is dependent upon media used and proper maintenance and operation of the printer. Print media other than bond paper (e.g., labels, card stock, plastic, or vinyl) may reduce drum life as much as 50%.

For more information, please go to our website at **www.printronix.com**.

L5520 Multifunction Printer

Operator’s Guide

171639-001B

Software License Agreement

CAREFULLY READ THE FOLLOWING TERMS AND CONDITIONS BEFORE USING THIS PRINTER. USING THIS PRINTER INDICATES YOUR ACCEPTANCE OF THESE TERMS AND CONDITIONS. IF YOU DO NOT AGREE TO THESE TERMS AND CONDITIONS, PROMPTLY RETURN THE PRINTER AND ALL ACCOMPANYING HARDWARE AND WRITTEN MATERIALS TO THE PLACE YOU OBTAINED THEM, AND YOUR MONEY WILL BE REFUNDED.

Definitions.

“Software” shall mean the digitally encoded, machine-readable data and program. The term “Software Product” includes the Software resident in the printer and its documentation. The Software Product is licensed (not sold) to you, and Printronix, Inc. either owns or licenses from other vendors who own, all copyright, trade secret, patent and other proprietary rights in the Software Product.

License.

1. Authorized Use. You agree to accept a non-exclusive license to use the Software resident in the printer solely for your own customary business or personal purposes.
2. Restrictions.
    a. To protect the proprietary rights of Printronix, Inc., you agree to maintain the Software Product and other proprietary information concerning the typefaces in strict confidence.
    b. You agree not to duplicate or copy the Software Product.
    c. You shall not sublicense, sell, lease, or otherwise transfer all or any portion of the Software Product separate from the printer, without the prior written consent of Printronix, Inc.
    d. You may not modify or prepare derivative works of the Software Product.

e. You may not transmit the Software Product over a network, by telephone, or electronically using any means; or reverse engineer, decompile or disassemble the Software.

f. You agree to keep confidential and use your best efforts to prevent and protect the contents of the Software Product from unauthorized disclosure or use.

3. Transfer. You may transfer the Software Product with the printer, but only if the recipient agrees to accept the terms and conditions of this Agreement. Your license is automatically terminated if you transfer the Software Product and printer.

Limited Software Product Warranty

Printronix, Inc. warrants that for ninety (90) days after delivery, the Software will perform in accordance with specifications published by Printronix, Inc. Printronix, Inc. does not warrant that the Software is free from all bugs, errors and omissions.

Remedy

Your exclusive remedy and the sole liability of Printronix, Inc. in connection with the Software is replacement of defective software with a copy of the same version and revision level.

Disclaimer of Warranties and Limitation of Remedies

1. THE PARTIES AGREE THAT ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY ARE EXCLUDED.
   Printronix, Inc. does not warrant that the functions contained in the Software will meet your requirements or that the operation of the Software will be uninterrupted or error free.
   Printronix, Inc. reserves the right to make changes and/or improvements in the Software without notice at any time.

2. IN NO EVENT WILL PRINTRONIX, INC. BE LIABLE FOR LOST PROFITS, LOST DATA, BUSINESS INTERRUPTIONS, OR ANY OTHER DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF OR INABILITY TO USE THIS PRODUCT, EVEN IF PRINTRONIX, INC. HAS BEEN ADVISED OF THE

POSSIBILITY OF SUCH DAMAGES, OR ANY DAMAGES CAUSED BY THE ABUSE OR MANIPULATION OF THE SOFTWARE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

3. Printronix, Inc. will not be liable for any loss or damage caused by delay in furnishing a Software Product or any other performance under this Agreement.
4. Our entire liability and your exclusive remedies for our liability of any kind (including liability for negligence except liability for personal injury caused solely by our negligence) for the Software Product covered by this Agreement and all other performance or nonperformance by us under or related to this Agreement are limited to the remedies specified by this Agreement.
5. California law governs this Agreement.

Termination of License Agreement

This License shall continue until terminated. This license may be terminated by agreement between you and Printronix, Inc. or by Printronix, Inc. if you fail to comply with the terms of this License and such failure is not corrected within thirty (30) days after notice. When this License is terminated, you shall return to the place you obtained them, the printer and all copies of the Software and documentation.

U.S. Government Restricted Rights

Use, duplication or disclosure by the Government is subject to restrictions as set forth in the Rights in Technical Data and Computer Software clause at FAR 242.227-7013, subdivision (b) (3) (ii) or subparagraph (c) (1) (ii), as appropriate. Further use, duplication or disclosure is subject to restrictions applicable to restricted rights software as set forth in FAR 52.227-19 (c) (2).

Acknowledgement of Terms and Conditions

YOU ACKNOWLEDGE THAT YOU HAVE READ THIS AGREEMENT, UNDERSTAND IT, AND AGREE TO BE BOUND

BY ITS TERMS AND CONDITIONS. NEITHER PARTY SHALL BE BOUND BY ANY STATEMENT OR REPRESENTATION NOT CONTAINED IN THIS AGREEMENT. NO CHANGE IN THIS AGREEMENT IS EFFECTIVE UNLESS WRITTEN AND SIGNED BY PROPERLY AUTHORIZED REPRESENTATIVES OF EACH PARTY. BY USING THIS PRINTER, YOU AGREE TO ACCEPT THE TERMS AND CONDITIONS OF THIS AGREEMENT.

Communication Notices

Federal Communications Commission (FCC) Statement: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provided reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Printronix is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by any unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Canadian Department of Communications Compliance Statement: This Class A digital apparatus complies with Canadian ICES-003.

Avis de conformite aux normes du ministere des Communcations du Canada: Cet appareil numerique de la classe A est conform á norme NMB-003 du Canada.

European Community (EC) Conformity Statement:
This product is in conformity with the protection requirements of EC Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility. Printronix cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-Printronix option cards.

German Conformity Statement:
Zulassungsbescheinigung Gesetz über die elektromagnetische Verträglichkeit von Geraten (EMVG) vom 30. August 1995

Dieses Gerät ist berechtigt in Übereinstimmung mit dem deutschen das EG-Konformitätszelchen - CE - zu führen.

Der Außteller der Konformitätserklärung ist die Printronix.....(1)

Informationen in Hinsicht EMVG Paragraph 3 Abs. (2) 2:

Das Gerät erfüllt die Schutzanforderungen nach EN 50082-1 und EN 55022 Klasse A.

EN 55022 Klasse A Geräte bedürfen folgender Hinweise:

Nach dem EMVG: “Geräte dürfen an Orten, für die sie nicht asreichend entstört sind, nur mit besonderer Genehmigung des Bundesminesters für Post und Telekommunikation oder des Bundesamtes für Post und Telekommunikation betrieben werden. Die Genehmigung wird erteilt, wenn keine elektromagnetischen Störungen zu erwarten sind.” (Auszug aus dem EMVG, Paragraph 3, Abs. 4) Dieses Genehmigungsverfahren ist nach Paragraph 9 EMVG in Verbindung mit der entsprechenden Kostenverordnung (Amtsblatt 14/93) kostenpflichtig.

Nach der EN 55022: “Dies ist eine Einrichtung der Klasse A. Diese Einrichtung kann im Wohnbereich Funkstörungen verursachen; in diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen durchzuführen und dafür aufzkommen.”

Anmerkung: Um die Einhaltung des EMVG sicherzustellen sind die Geräte, wie in den Handbüchern angegeben, zu installieren und zu betreiben.

This product has been tested and found to comply with the limits for Class A Information Technology Equipment according to European Standard EN 55022. The limits for Class A equipment were derived for commercial and industrial environments to provide reasonable protection against interference with licensed communication equipment.

Warning

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

警告使用者:
這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

注意
この装置は、第一種情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。 VCCI-A

Trademark Acknowledgements

Centronics is a registered trademark of Genicom Corporation.

CSA is a registered certification mark of The Canadian Standards Association.

Dataproducts is a registered trademark of Dataproducts Corporation.

EIA is a registered service mark of the Electronic Industries Association.

Epson is a registered trademark of Seiko Epson Corporation.

Ethernet is a trademark of Xerox Corporation.

Hitachi is a registered trademark of Kabushiki Kaisha Hitachi Seisakusho DBA Hitachi, Ltd.

IBM, OS/2, and Proprinter are registered trademarks, PC-DOS and IPDS are trademarks of International Business Machines Corporation.

IGP, LaserLine, LinePrinter Plus, PGL, PSA, and Printronix are registered trademarks. FlashFusion is a trademark of Printronix, Inc.

MS-DOS and Windows are registered trademarks of Microsoft Corporation.

PhoenixPage PCL 5 is a registered trademark of Phoenix Technologies LTD.

SELFOC is a registered trademark of Nippon Sheet Glass Co., Ltd.

3M is a registered trademark of the Minnesota Mining and Manufacturing Company.

Toray is a registered trademark, and Toraysee is a trademark of Toray Industries, Inc.

UL is a registered certification mark of Underwriters Laboratories Inc.

This product uses Intellifont Scalable typefaces and Intellifont technology. Intellifont is a registered trademark of Agfa Division, Miles Incorporated (Agfa).

CG, Garth Graphic, Intellifont, and Type Director are registered trademarks, and Shannon and CG Triumvirate are trademarks of Agfa Division, Miles Incorporated (Agfa). CG Bodoni, CG Century Schoolbook, CG Goudy Old Style, CG Melliza, Microstyle, CG Omega, and CG Palacio are products of Agfa Corporation. CG Times, based on Times New Roman under license from The Monotype Corporation Plc is a product of Agfa.

Univers is a registered trademark of Linotype AG and/or its subsidiaries.

Letraset is a registered trademark, and Aachen, Revue and University Roman are trademarks of Esselte Pendaflex Corporation.

Futura is a registered trademark of Fundición Tipográfica Neufville, S.A.

ITC Avant Garde Gothic, ITC Benguiat, ITC Bookman, ITC Century, ITC Cheltenham, ITC Clearface, ITC Galliard, ITC Korinna, ITC Lubalin Graph, ITC Souvenir, ITC Tiepolo, ITC Zapf Chancery, and ITC Zapf Dingbats are registered trademarks of International Typeface Corporation.

Albertus, Gill Sans, and Times New Roman are registered trademarks, and Monotype Baskerville is a trademark of The Monotype Corporation Plc, registered in the U.S. Pat. and TM office and elsewhere.

Hiroshige and Marigold are trademarks of AlphaOmega Typography, Inc.

Printronix, Inc. makes no representations or warranties of any kind regarding this material, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose.

Printronix, Inc. shall not be held responsible for errors contained herein or any omissions from this material or for any damages, whether direct, indirect, incidental or consequential, in connection with the furnishing, distribution, performance or use of this material. The information in this manual is subject to change without notice.

This document contains proprietary information protected by copyright. No part of this document may be reproduced, copied, translated or incorporated in any other material in any form or by any means, whether manual, graphic, electronic, mechanical or otherwise, without the prior written consent of Printronix, Inc.

Copyright © 2000, Printronix, Inc. All rights reserved.

Table of Contents

1 Introduction 17

About This Manual 17
Important Safety Precautions 18
Safety Labels And Printer Components 20
About The Printer 24
Features 24
Emulations 24
Fonts And Forms 25

2 Initial Setup 23

Installation Overview 23
Loading Paper 23
Powering On The Printer 27
Using The Control Panel 29
Liquid Crystal Display (LCD) 29
Function Keys 31

3 Consumables Replacement 35

Consumables Replacement 35
Replacement Intervals 35
Replacing The Toner Cartridge 36
Replacing The Waste Toner Bottle 40
Replacing The Photoreceptor Drum 42
Installing The Photoreceptor Drum 46
Proper Disposal Of A Drum Unit 48
Replacing The Developing Unit 49
Replacing Or Adding The Developer 52
Developing Unit Removal 53
Installing The Developing Unit 56

Table of Contents

4 Scheduled Maintenance 63

Required Tools 63
Service Level Page Counts 64
Clearing Service Level Messages 65
Maintenance Schedules 66
User Replacement Schedule 67
General Cleaning 68
Vacuuming The Printer 68
Cleaning The Chargers 73
Precharger/Transfer Charger 77
Cleaning The Fuser Unit Cover Glass 79
Major Cleaning 84
Removing Cleaning Unit 84
Cleaning The Photoreceptor Drum 87
Cleaning The SELFOC® Lens 90

5 Troubleshooting 93

Troubleshooting 93
Maintaining Print Quality 93
Diagnostics 94
Offline Diagnostics 94
Online Diagnostics 94
Paper Jams 95
Paper Jam Near The Tractor 95
Paper Jam Near The Paper Output Section 96
Paper Jam In The Transport Input Section 101
Paper Jam In The Transport Output Section 104
System Status And Error Messages 105
Reprinting Pages After Fault Condition 105
Error Messages 110

Table of Contents

A Maintenance Log Sheets 119

Maintenance Log Sheets 119

B Specifications 123

Paper Specifications 123
Performance Characteristics 126
Host Interfaces 127
Emulations 128
Memory Requirements 128
Safety Regulations 128
Electromagnetic Interference 128
Physical Characteristics and Environment 129

Table of Contents

1 *Introduction*

About This Manual

This manual explains how to use your printer.

Safety Notices And Special Information

For your safety and to protect valuable equipment, it is very important that you read and comply with all information highlighted under the following special headings:

WARNING **A warning notice calls attention to a condition that could harm you.**

WARNUNG

Ein Warhinweis dieser Art weist auf Verletzungsgefahr hin.

AVISO

Las notas de adviso llaman la atención sobre una condición que puede causar lesiones.

ATTENTION

Attire votre attention sur une opération pouvant présenter un danger.

AVVERTENZA

Un'indicazione di avvertenza segnala una condizione di pericolo suscttibile causare lesioni all'operatore.

CAUTION **A caution notice calls attention to a condition that could damage the printer.**

IMPORTANT **An important notice provides information that is vital to proper operation of the printer.**

NOTE: A note provides information and helpful tips about printer operation.

Control Panel Keys And Display Messages

Keys and indicators that are labeled on the printer are printed in uppercase letters. For example:

Press ENTER to select the value shown on the LCD.

Messages that appear on the control panel message display (called the Liquid Crystal Display, or LCD), are printed in uppercase letters and enclosed in quotation marks. For example:

“ENTER SWITCH LOCKED” appears on the LCD.

Important Safety Precautions

This chapter provides safety information that helps you prepare for installation and operation of the printer. The actual installation, initial setup, and testing should be performed only by a factory-trained service representative.

Observe the following precautions at all times to ensure safe operation of the printer.

Read all instructions before you do any procedure.

Follow all safety notices and instructions printed in this manual and marked on the printer.

The operator-accessible power switch does not shut off all power to the printer. You must unplug the power cord to shut off all power to the printer.

The power outlet must be installed near the equipment and must be easily accessible.

The printer relies on protective devices in the building installation for protection. The printer must be connected to a 30 Amp, 250 V outlet.

Do not operate the printer in a room that is not properly ventilated. The room should be at least 1,000 cubic feet with a complete air exchange every two hours.

Keep combustible materials away from the printer. Dispose of used toner properly, as it is flammable.

Some components in the printer are potentially hazardous. For example, the fuser unit becomes very hot under normal operating conditions, and several components use high voltage.

Handle the photoreceptor drum properly, due to the nature of the material. Do not put used drums in the trash; ship them to the appropriate disposal facility for recycling. (See page 48.)

Do not block or obstruct any cabinet ventilation slots.

Never spill liquid of any kind on or in the printer. Use only manufacturer-approved cleaning agents and methods.

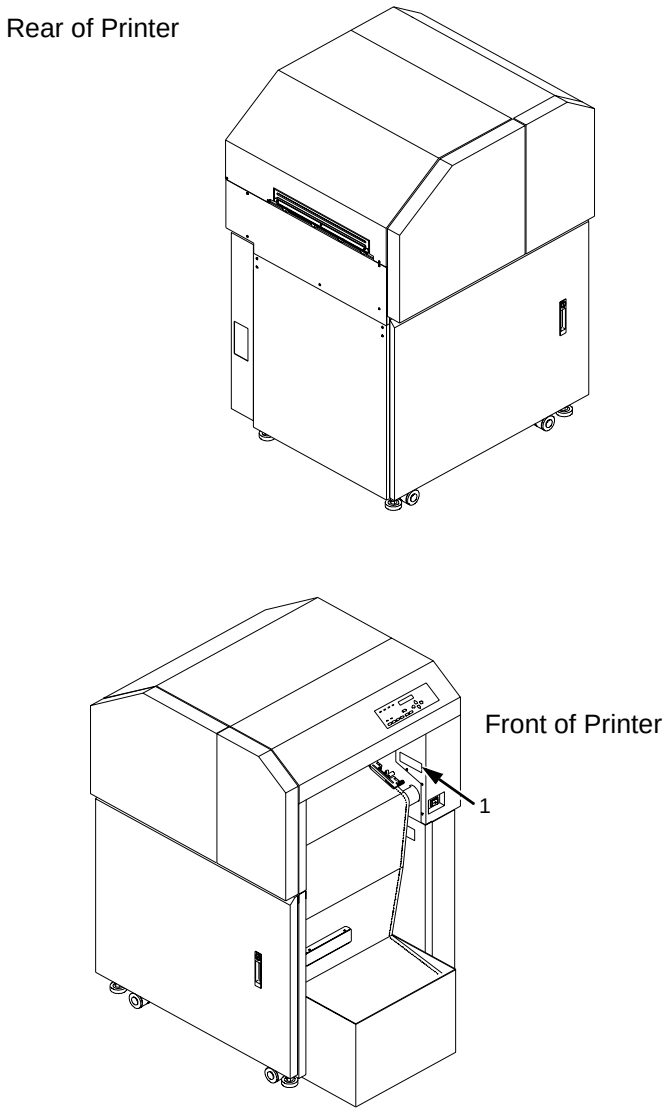
Make sure nothing rests on the power cord. Do not locate the power cord where people can walk on it. Do not place the power cord under any carpet.

Do not lean on or place heavy objects on top of the printer.

Turn off the power immediately if the printer emits an unusual noise or smell.

Do not look directly at the flash lamp light.

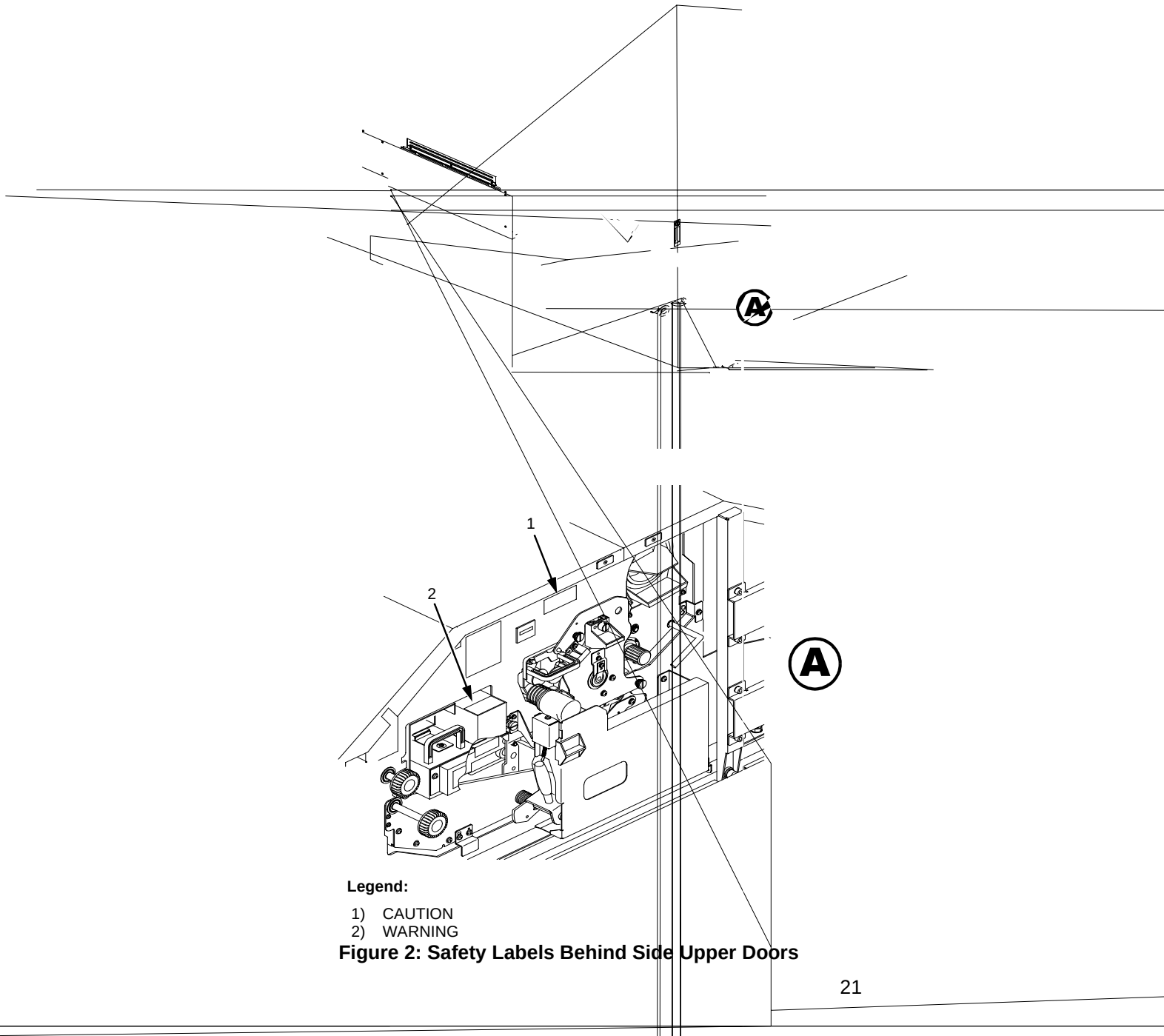
Safety Labels And Printer Components



Legend:

1) CAUTION

Figure 1: Rear and Front Views

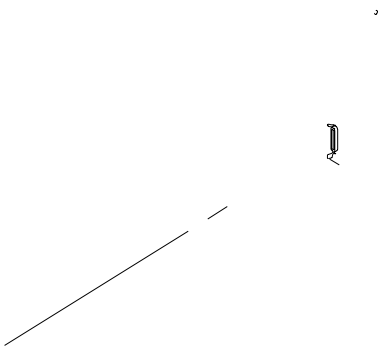


Legend:

1) CAUTION
2) WARNING

Figure 2: Safety Labels Behind Side Upper Doors

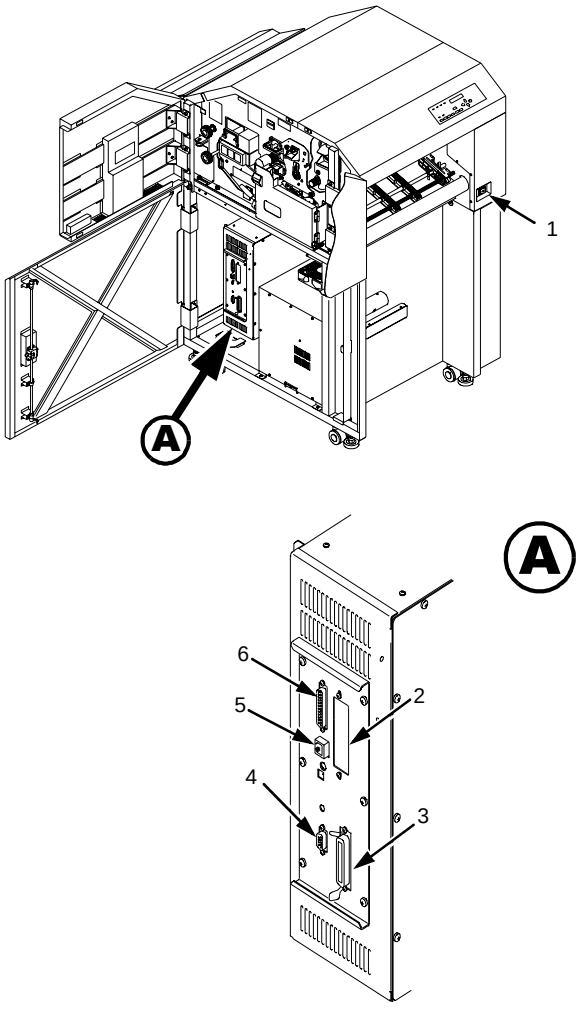
Chapter 1 Safety Labels And Printer Components



Legend:

1) Knob C
2) Fuser Unit
3) Cleaning Unit
4) Main Charger
5) Toner Cartridge
6) Control Panel
7) Paper Feed Tractors
8) Developing Unit
9) Waste Toner Recovery Unit
10) Power Supply for Flash Lamp
11) Transport Unit

Figure 3: Printer Components1234589101176



Legend:

1) Power Switch
2) Parallel Port/ Optional Ethernet Portt
3) Optional Coax/Twinax Port
4) General Purpose I/O Port
5) Diagnostic Port
6) Serial Port

Figure 4: Power Switch and Printer Interfaces

About The Printer

Printing speed is 20 pages per minute on continuous letter size and A4 size fanfold forms (long edge fed). The printer produces printed output with a 300 x 300 or, optionally, 240 x 240 or 400 x 400 dots-per-inch (dpi) resolution. See Appendix B for printer specifications.

Features

Features include the following:

- Continuous fanfold paper
- User-replaceable toner cartridge
- FlashFusion™ fusion technology
- Two-line, 16-character alphanumeric display that provides operating and error messages
- Flash Memory which stores preset configurations and emulations
- Serial and parallel interfaces
- Ethernet™ network adaptor (optional)
- Coax/Twinax interfaces (optional)
- Power stacker (optional)

Emulations

Your printer comes equipped with the Printronix® LinePrinter Plus® emulation software (which emulates an impact printer). Printronix LinePrinter Plus includes the following printer protocols:

- P-Series
- P-Series XQ
- Serial Matrix
- Proprinter® III XL
- Epson® FX-1050

Printronix LinePrinter Plus provides portrait and landscape image orientation. Automatic 1-up, 2-up, 4-up, and gray bar overprinting are also provided. The emulation offers optional proportional (scalable) fonts and multi-up form definition capability as well.

The following optional emulations are also available:

- IGP®/PGL®
- IGP/VGL
- PCL5®
- IPDS™

For specific information on each emulation, see the appropriate emulation manual.

Fonts And Forms

The printer provides a variety of resident fonts. The emulation you are using determines what resident fonts are available. For example, the LinePrinter Plus emulation provides CG Times, Letter Gothic, Courier, OCR-A, and OCR-B as standard sets of fonts.

With either the LinePrinter Plus or PCL 5 emulations, you can load additional fonts into printer memory from the host computer. Once any additional fonts are in printer memory, you can then access them in the same way as the resident fonts. Note that if you download fonts from the host computer and do not save them, the downloaded fonts are lost when the printer is powered off.

You can store forms together with fonts. The storage space for forms and fonts depends upon the amount of printer memory available. You can manipulate different fonts and/or forms depending upon the emulation installed.

Chapter 1 About The Printer

2 *Initial Setup*

Installation Overview

The installation and setup of your printer should be performed by a service provider trained and authorized by Printronix. Your service provider is also responsible for doing a preinstallation site survey, unpacking the printer, connecting the power and host data cables, and installing the first set of consumable items in the printer. Depending on the terms of your service contract, your service provider might also power on your printer and configure it.

As the owner of the printer, it is your responsibility to prepare the printer site. This includes providing adequate ventilation and power for the printer.

Loading Paper

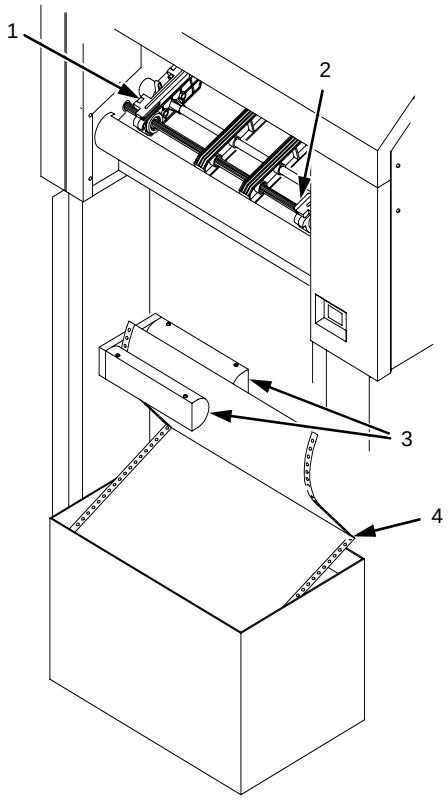
When loading paper, be sure the leading edge of the paper has a clean, separating perforation without ragged edges.

NOTE: You do not need to power off the printer to replace paper. If you leave the printer on and replace the paper, it will resume printing where it left off when you put it online.

To load paper, perform the following steps. Repeat this procedure whenever top-of-form must be reset (e.g., after clearing a paper jam, loading new paper, etc.).

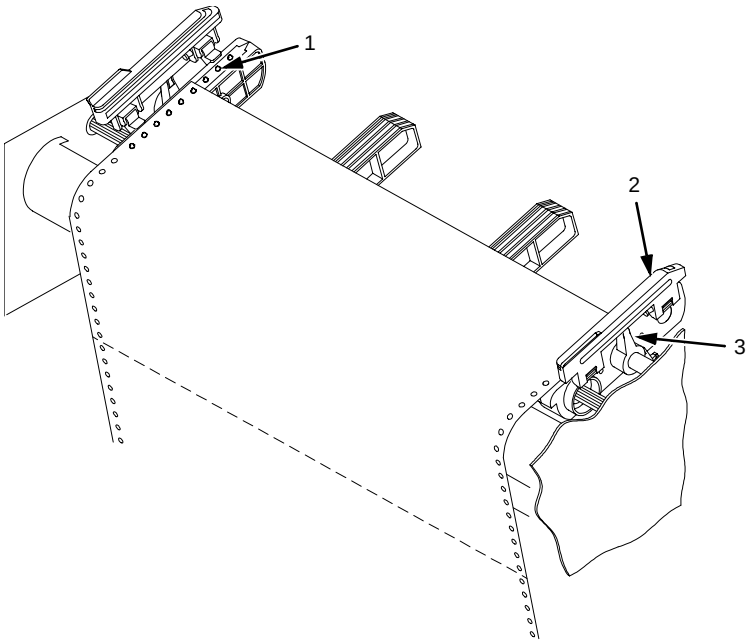
IMPORTANT **To prevent jams the first fold of the paper must face toward the printer as shown.**

1. Place the paper box under the tractor unit with the first paper fold toward the printer.



Legend:

1) Left Tractor
2) Right Tractor
3) Lower Paper Guides
4) First paper fold is toward printer.



Legend:

1) Tractor Pins
2) Tractor Gates
3) Tractor Lock

2. Pass the leading edge of the paper between the lower paper guides, as shown above.
3. Only unlock the right tractor by pushing forward on the tractor lock.
4. Open the left and right tractor gates and place the paper about half-way onto the tractor pins.

NOTE: Do not push the paper past the tractors; a paper jam sensor will detect a paper jam if the paper is pushed too far.

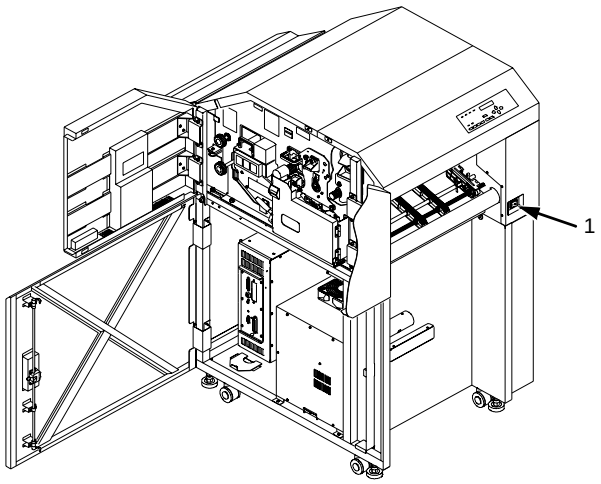
5. Close the left tractor gate.

6. Move the right tractor to the left or right until its pins line up with the holes in the right edge of the paper, then close the right tractor gate.

NOTE: When you place the paper on the tractors, you should introduce a slight amount of side-to-side tension into the paper. The right tractor must be set far enough to the right so that there is no looseness or wrinkles in the paper. Be careful not to set the right tractor too far to the right, however, as too much tension may cause the paper holes to tear away from the tractor pins.

7. Tighten the paper by moving the right tractor slightly outward and lock the right tractor with the tractor lock.
8. If you are reloading paper following a “Paper Empty” message with the printer power on, press ONLINE to place the printer online. The printer automatically sets the physical top of form at the leading edge of the paper and resumes printing.

Powering On The Printer



Legend:

1) Power Switch

Figure 5. Power Switch

CAUTION **The printer must be connected to the proper power source: 220-240 VAC and 50-60 Hz, as shown on the rear panel label. Using an incorrect power source may damage the printer.**

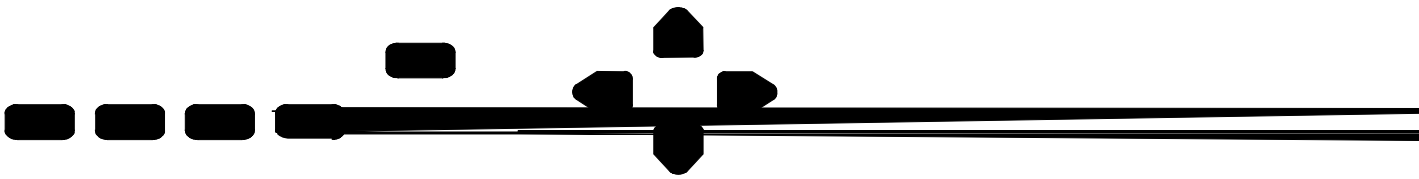
1. Make sure the printer is plugged into the appropriate power source, the interface cable is connected, and the host computer is on.

2. Turn on the printer by setting the power switch to | (on). When you power on the printer, the following occurs:
   a. The printer reads the emulation boot file and briefly displays the message:
      TESTING HARDWARE
      PLEASE WAIT...
   b. DIAGNOSTICS PASSED
   c. STAND BY Light Flashes
   d. The ONLINE indicator lights continuously and STAND BY goes out.

NOTE: The printer can be set to power on in the OFFLINE state instead of the ONLINE state. To print, ONLINE must be lit; if it is not, press ONLINE.

If other messages and prompts appear on the control panel, answer the prompts and follow the directions as explained on page 105.

Using The Control Panel



Legend:

1) Status Indicators
2) Liquid Crystal Display (LCD)
3) Paper Path Diagram
4) Function Keys

Figure 6. Control Panel

The control panel (Figure 2) is located on the top right side of the front cover.

Liquid Crystal Display (LCD)

The liquid crystal display (LCD) displays printer status, messages, configuration options, and error codes.

Status Indicators

The status indicators on the control panel display the current operational status of the printer.

LINE SYNC

Twinax interface only. Indicates there is activity on the line from the host computer.**J**

SYS AVAIL

Twinax interface only. Indicates there is activity to the current address on the line.

JOB IN PROCESS

When the printer is receiving or processing data, JOB IN PROCESS flashes. If data has been processed and is waiting to be printed, or has been printed but not yet fused and ejected by the printer, JOB IN PROCESS lights continuously.

JOB IN PROCESS does not light when the printer is not processing data, no data exists in the buffer, and the printer is not receiving data.

STAND BY

STAND BY flashes while the printer executes a control panel command, and while the printer is unavailable for printing due to normal system activities, such as while it is booting, printing its configuration, writing status information, and loading applications.

IMPORTANT **Do not press any control panel key when STAND BY is flashing. The printer may carry out unwanted commands.**

ONLINE

ONLINE is lit continuously when the printer is online (i.e. the printer is ready to print and accept data from the host). ONLINE flashes when the printer is offline or when the printer stops because of an error.

FAULT

FAULT flashes when the printer is unavailable for printing because of an internal error.

Function Keys

The function keys permit you to configure the parameters, or options, of the printer. You can access these parameters via a structured menu which is displayed on the LCD. To navigate through the options, use the UP, DOWN, NEXT, and PREV switches. Press ENTER to select an option that appears on the LCD.

When pressing the switches, you will hear a “beep” (the “panel key sound”), which verifies contact.

NOTE: You can enable or disable the panel key sound via the configuration menu.

For specific procedures and information regarding the configuration menu, refer to the *User’s Manual.*

The purpose of each function key (under normal printing mode) is defined below.

ONLINE Key

The ONLINE key toggles the printer online and offline.

- To place the printer online, press ONLINE until the ONLINE status indicator remains continuously lit. The LCD displays “ONLINE” and the name of the current emulation. The printer can now receive and process data and print.
- To place the printer offline, press ONLINE until the ONLINE status indicator blinks. The LCD displays “OFFLINE.” The printer stops processing and printing data, except for any pages in process.
- To start downloading files to the printer, hold down the ONLINE + CLEAR key while cycling power. See Chapter 3 in the *User’s Manual* for more information.

NOTE: When the printer *is not* in an error state, pressing ONLINE in any level of the configuration menu causes the printer to accept any configuration changes you have entered and return to online status.

When the printer is in an error state, pressing ONLINE in any level of the configuration menu causes the printer to display the fault message again.

CLEAR Key

- In the fault state, press the CLEAR key to clear errors and reset the printer to the offline state (if all errors are cleared).
- To start downloading files to the printer, hold down the ONLINE + CLEAR key while cycling power. See Chapter 3 in the *User's Manual* for more information.

TEST Key

When the printer is offline, you can make a test print, as configured under the Test Print menu, by pressing the TEST key. To stop the test print, press TEST again.

Pressing TEST when the printer is online has no effect.

SHIFT Key

This key does not have a function of its own. It is used in combination with other keys to modify their functions.

PAGE EJECT Key

The PAGE EJECT key performs the following functions when the printer is online:

When the JOB IN PROCESS status indicator lights *steadily,* pressing PAGE EJECT causes the printer to print all data in the printer. The page is then cut at the perforation (unless the Burst On Eject option is disabled).

When the JOB IN PROCESS status indicator *flashes,* pressing PAGE EJECT causes the printer to print any data left in the buffer. The paper motion caused by the page eject operation may interrupt the printing of data that is not currently in the buffer. Once the paper motion has occurred, the data that was not yet in the buffer should print. The page is then cut at the perforation (unless the Burst On Eject option is disabled).

To start downloading files to the printer, power off, then press the PAGE EJECT + ONLINE key and hold them down while powering on the printer. (See “Downloading Files Into Flash Memory” section in Chapter 3 in the *User’s Manual*.)

IMPORTANT **Do not press PAGE EJECT while JOB IN PROCESS is flashing, or your print job might become misaligned.**

When the JOB IN PROCESS status indicator is not lit or flashing, PAGE EJECT has no effect.

Pressing the SHIFT + PAGE EJECT keys together moves the paper one paper length without printing or cutting the paper. It can be used to feed the paper into (customer-supplied) postprocessing equipment.

ENTER Key

When you enter parameters in the configuration menu, press ENTER to select the value shown in the LCD. The printer confirms your selection by placing an asterisk (*) next to the value in the display. However, if the ENTER key is locked, “ENTER SWITCH LOCKED” appears and the value is not accepted.

CANCEL Key

The CANCEL key has the following functions when the printer is offline:

- Cancels the current page in process
- Cancels any pages queued to print but not yet printed
- Cancels any input data not yet processed
- Clears the reprint buffers
- Cancels a download if one is in process

UP And DOWN Keys

The UP and DOWN keys are used for the configuration menu:

- To unlock or lock the ENTER key, press UP + DOWN at the same time when the printer is offline
- The ENTER key lock can be configured to be a key combination other than UP + DOWN (Refer to the “Unlocking And Locking The Configuration Menu” section in Chapter 3 in the *User’s Manual* for more information)
- To enter the configuration menu, press DOWN when the printer is offline
- To move between the different levels in the configuration menu, either press UP or DOWN as needed

NEXT And PREV Keys

The NEXT and PREV keys are used to move between the parameter options on the current level of the configuration menu. Press NEXT or PREV to move forward or backward through parameter options.

3 *Consumables Replacement*

Consumables Replacement

Replace printer consumables at the intervals specified on page 36 for the best print quality. The yield of the supplies is based on a 4% coverage of letter size (8.5 inch x 11 inch) paper. However, the yield may vary according to your print applications, environmental conditions, and toner density setting.

Replacement Intervals

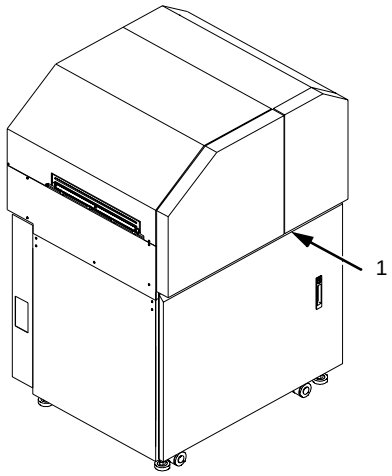
Consumable Item	Part Number	Replacement Interval (in Pages)[1]
Toner Cartridge	703532-001	21,000
Waste Toner Bottle	703539-001	150,000
Photoreceptor Drum	703535-001	150 - 300,000 See Note 2
Developer	703548-001	150,000
Developing Unit	705739-001	600,000

Note 1: Will vary with paper size, media type, and toner coverage.
Note 2: Replace at 300,000 pages or sooner if print quality is no longer acceptable. Drum life is dependent upon media used and proper maintenance and operation of the printer. Print media other than bond paper (e.g. labels, card stock, plastic, or vinyl) may reduce drum life by as much as 50%.

Replacing The Toner Cartridge

NOTE: Wear vinyl gloves to prevent toner from contacting the skin. Use only cold water to remove toner from skin or clothing. Put the old cartridge in a disposable wrapper (a plastic bag, paper towels, newspaper) to minimize toner spillage.

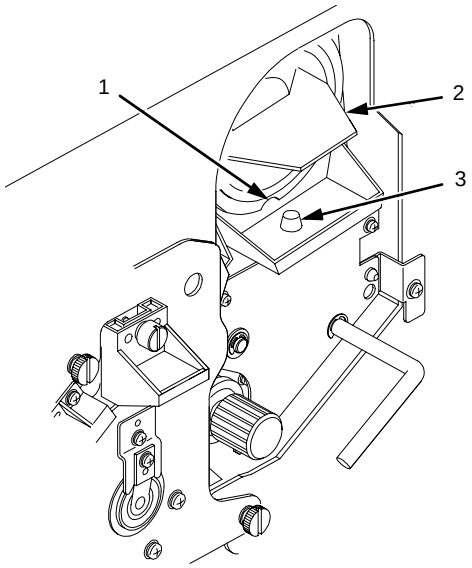
1. Take the printer off line.
2. When paper motion stops, wait 15 seconds, then open the printer upper doors.



Legend:

1) Upper Doors

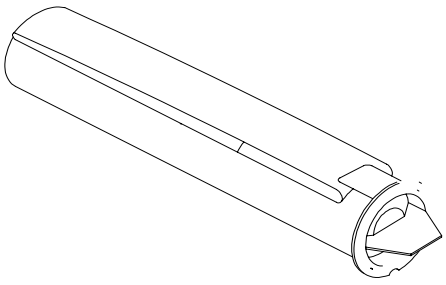
3. Rotate the old toner cartridge counterclockwise until the notch is aligned with the pin in the toner hopper, and remove the cartridge.



Legend:

1) Notch
2) Toner Cartridge
3) Positioning Pin

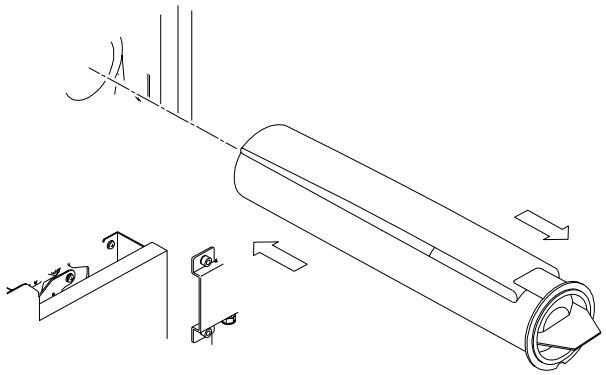
4. Put the old cartridge into a plastic bag and discard it.
5. Keep the new toner cartridge in its package. Hold it level and shake it back and forth three or four times as shown.



Legend:

1) Toner Cartridge

6. Remove the new toner cartridge from its package.
7. With the cover tape facing up, insert the cartridge into the toner hopper, and slowly pull off the cover tape in the direction of the arrow. Remove the last of the tape just as the cartridge is completely inside the hopper..

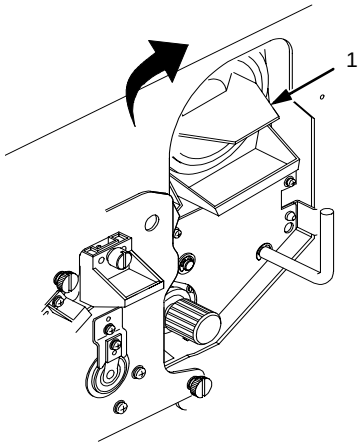


Legend:

1) Toner Hopper
2) Cover Tape
3) Notch

8. Push the new toner cartridge as far as possible into the toner hopper.1

9. Rotate the cartridge clockwise as far as it will turn.



Legend:

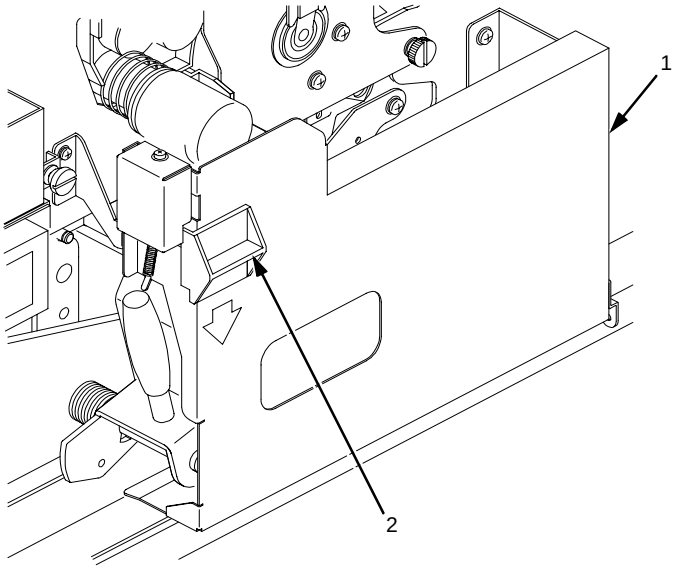
1) Toner Cartridge

10. If any toner has spilled, remove it with wet tissue paper or a toner vacuum.
11. Close the upper doors.

Replacing The Waste Toner Bottle

When the “WASTE TONER FULL” message appears on the control panel, replace the waste toner bottle by performing the following steps, and discard the empty bottle. Do not reuse the bottle.

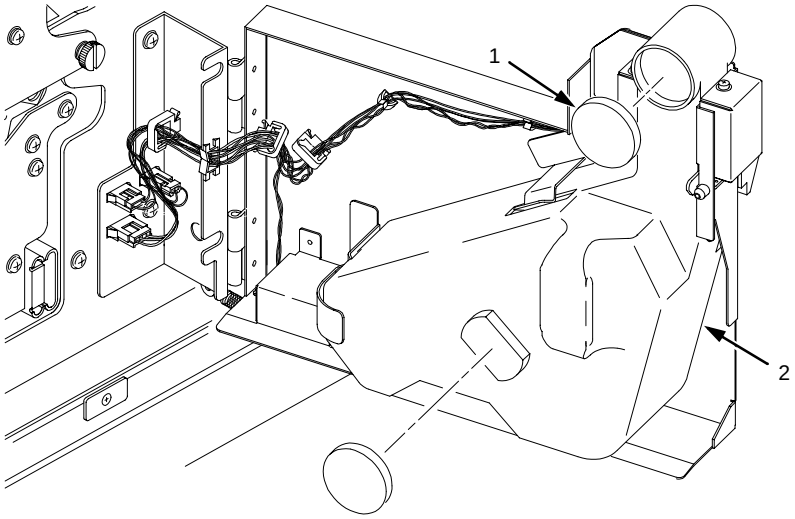
1. Open the printer upper doors. (See page 36.)
2. Open the waste toner recovery unit.



Legend:

1) Waste Toner Recovery Door
2) Opening Lever

3. Remove the cap from the outside of the waste toner bottle, and cap the toner bottle.



Legend:

1) Cap
2) Waste Toner Bottle

4. Remove the waste toner bottle from the unit and discard it.
5. Install a new waste toner bottle.
6. Close the printer upper doors.
7. Clear Error 28, “Waste Toner Full,” as follows:
   a. Press CLEAR.
   b. Press UP + DOWN to unlock the configuration menu.
   c. Enter the configuration menu and select the Paper Control menu.
   d. Select the "Reset Toner Full" option and press ENTER.
   e. Exit the configuration menu.
   f. Press ONLINE.

Replacing The Photoreceptor Drum

Drum life depends upon the media used and proper maintenance and operation of the printer. Print media other than bond paper (e.g., labels, card stock, plastic, or vinyl) can reduce drum life as much as 50%.

To replace the drum, you need a drum auxiliary rod. Please read all steps before doing this procedure.

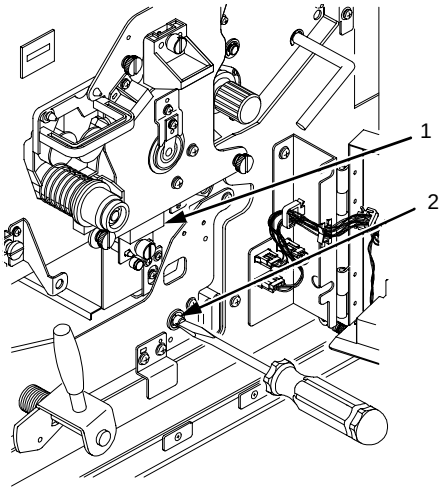
Removal

CAUTION **Do not replace the photoreceptor drum unless you have been trained to do so. You cannot do this procedure without the drum auxiliary rod (P/N 703531-170), as you may damage the drum.**

1. Set the power switch to O (Off).
2. Open the printer upper doors. (See page 36.)
3. Open the waste toner recovery unit. (See page 40.)
4. Remove the developing unit. (See page 42.)
5. Vacuum any spilled toner.

CAUTION **The transfer charger must be in the down position to avoid scratching the drum.**

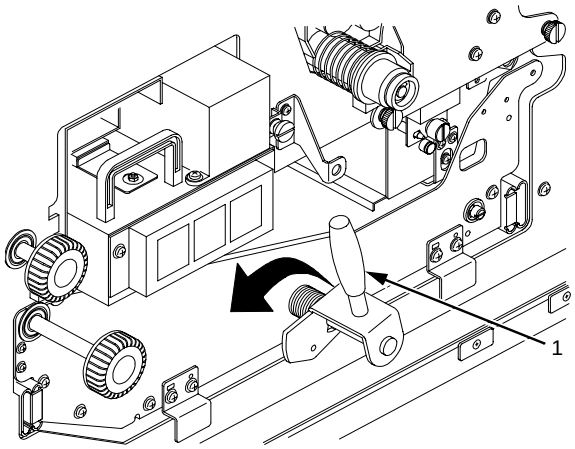
6. Check that the transfer charger is in the down position. Move it to the down position by rotating the transfer elevator drive shaft counterclockwise. Watch the charger movement:
   a. If the charger starts to move up, it is already in the down position.
   b. If the charger starts to move down, continue to rotate the drive shaft until the charger reaches the complete down position.



Legend:

1) Transfer Charger
2) Transfer Elevator Drive

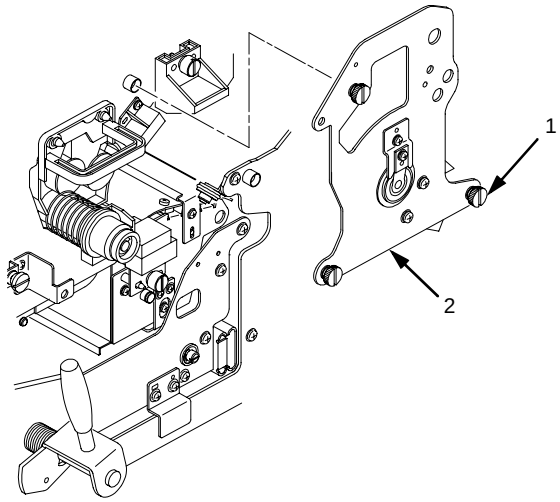
7. Lower the transport unit by turning the green lever on the transport unit to the left.



Legend:

1) Green Lever

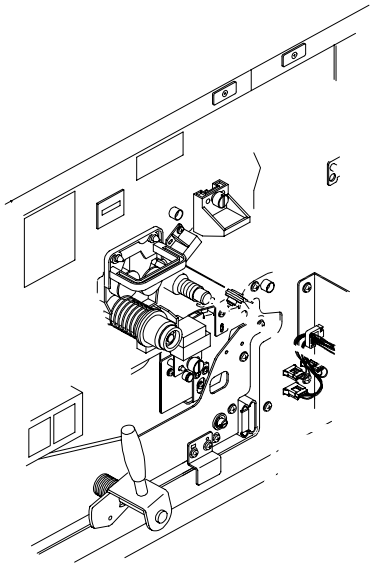
8. Loosen the three thumbscrews securing the drum plate and remove the drum plate.



Legend:

1) Thumbscrews (3)
2) Drum Plate

9. Remove the nut from the end of the drum shaft.

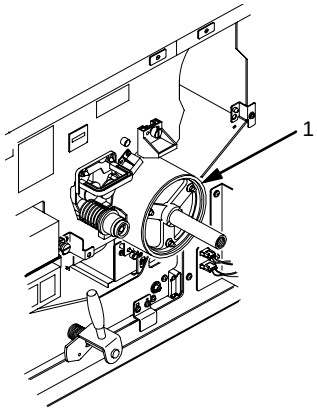


Legend:

1) Nut

10. Screw the drum [illegible] into the drum shaft.

11. Pull the drum out along the drum auxiliary rod. Hold the front and back ends when the drum is nearly out of the printer, and remove it with both hands.



Legend:

1) Drum

12. Pack the old drum for shipment using the original packaging material, and close the cover of the box.
13. Wipe the drum shaft clean with a cloth.

Installing The Photoreceptor Drum

CAUTION **Avoid touching the surface of the drum with your hands. It reduces the life of the drum. Exposing the drum to light shortens its life. Do not expose the drum to direct sunlight, and install it within five minutes under typical room lighting conditions. When removing the drum from its packaging, do not touch the surface of the drum. Fingerprints and scratches can damage the surface and cause poor print quality.**

1. Wipe inside the endcaps of the drum with a cloth to ensure that they are clean.
2. Using both hands, carefully slide the drum onto the drum auxiliary rod. When the drum reaches the area where the auxiliary rod connects to the drum shaft, lift the drum very slightly over the connection. Let the drum rest on the rubber rollers as you gently guide it into the printer.

CAUTION **The drum must rest on the rubber rollers to avoid being scratched.**

3. When the drum is fully inserted into the printer, the end of the drum is slightly recessed relative to the front of the printer and the rubber guide rollers should be visible. Slightly lift the drum up off of the rubber rollers and rotate the drum by hand while applying inward pressure until the drum moves slightly farther into the printer and locks in place.

CAUTION **In order to position the drum slot and the drum shaft pin, push the drum in all the way to the back and rotate it until you feel it drop in place. Failure to lock the drum in place properly may cause severe damage to the printer.**

Never force the drum onto the shaft. If it feels as though the drum is not seating properly, remove the drum and inspect the shaft for any foreign material or burrs.

4. Unscrew the drum auxiliary rod from the drum shaft.
5. Install the nut on the drum shaft and tighten it securely by hand.
6. Install the drum plate and tighten the thumbscrews. While installing the drum plate, hold the copper grounding clip in place with your thumb. Otherwise the grounding clip can be bent, making no contact with the drum shaft.
7. After installing the drum plate, visually verify good electrical contact between the copper grounding clip and the end of the drum shaft.
   Alternatively, measure the resistance. Connect one lead of an ohmmeter to the bracket on the drum plate, and touch the other lead to the edge of the drum. Normal resistance should be 0 Ω.
8. Install the developing unit. (See page 56.)
9. Raise the transport unit by turning the green lever on the transport unit to the right.
10. Close the waste toner recovery unit and ensure that it latches.
11. Close the printer upper doors.

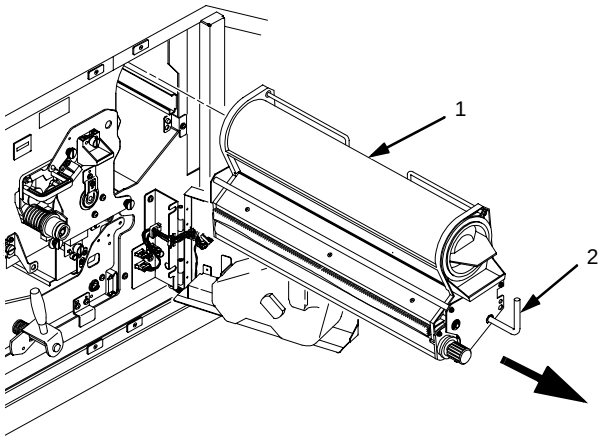
Proper Disposal Of A Drum Unit

Federal regulations prohibit inappropriate disposal of laser print drums. Dispose of used drums by shipping them to one of the following:

Within U.S.A.
U.S. Fuji Electric Inc.
240 Circle Drive N.
Piscataway, NJ 08854
Attn: Rod Storm
Phone: (732) 560-9410

Outside U.S.A.
Fuji Distribution Europe B.V.
Attn: Mr. Asada
Leisteen 7,2132 ME
Hoofddorp,
The Netherlands.
TEL: 20-6534790

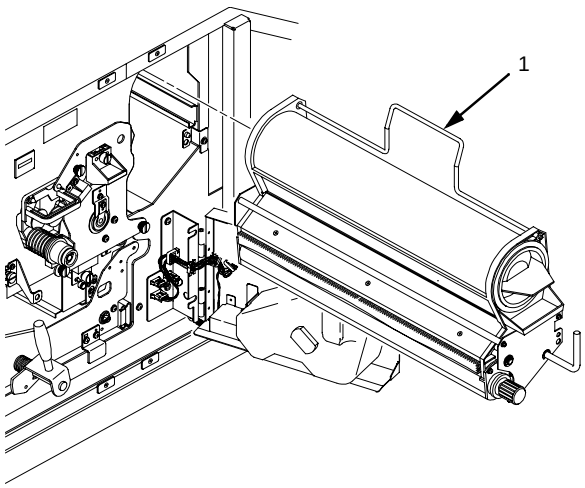
5. Remove the developing unit by holding the lever in one hand and pulling the developing unit partially out of the printer.



Legend:

1) Developing Unit
2) Lever

6. With your other hand, grasp the hanger and remove the developing unit from the printer.

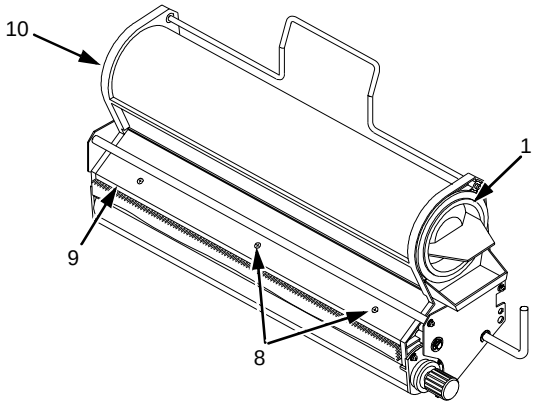


Legend:

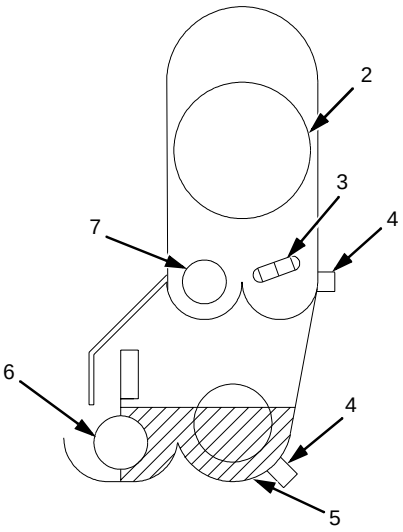
1) Hanger

7. Place the old developing unit in a plastic bag and dispose of it properly.
8. Vacuum any spilled toner.
9. Remove the new developing unit from its package, and add developer to the unit. (See page 55.)

Replacing Or Adding The Developer



Cross Section of Developing Unit



Legend:

1) Toner Cartridge
2) Toner Hopper
3) Auger
4) Sensor
5) Developing Tank
6) Developing Roller
7) Toner Supply Roller
8) Screws (3)
9) Cover
10) Developing Unit

oping Unit Removal

6.)

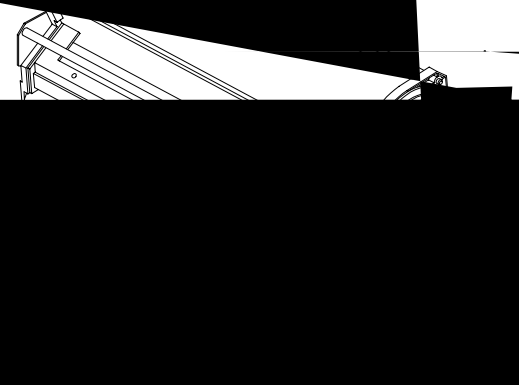
he developing unit.

and place it in the

.

ise until it stops,

ng unit.



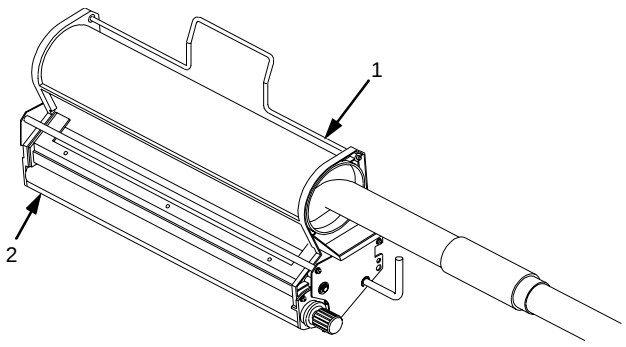
Legend

1) Develo
2) Toner Ca
3) Toner Cart
4) Cover
5) Screw (3)1

CAUTION **The toner sensor is sensitive to both electrostatic discharge (ESD) and positional adjustment. Do not touch the sensor with your hand or jar it from its factory-set position. (See page 52.)**

IMPORTANT **When replacing developer in an existing developing unit, you must empty and clean the unit before adding new developer Do this every 150,000 pages.**

6. Remove the three screws on the developing unit cover and the cover.
7. With the developing unit in the plastic bag, do the following:
   a. Remove the developer and toner in the toner hopper by gently shaking the developing unit up and down with the opening of the toner cartridge facing downward.
   b. Rotate the developing unit and gently shake it, to allow any remaining developer or toner to fall out of the cover slot.
8. Remove the developing unit from the plastic bag and place it on a protected surface.
9. Vacuum up any developer and toner which remains on the toner supply roller and the auger with a toner vacuum cleaner equipped with a narrow nozzle.



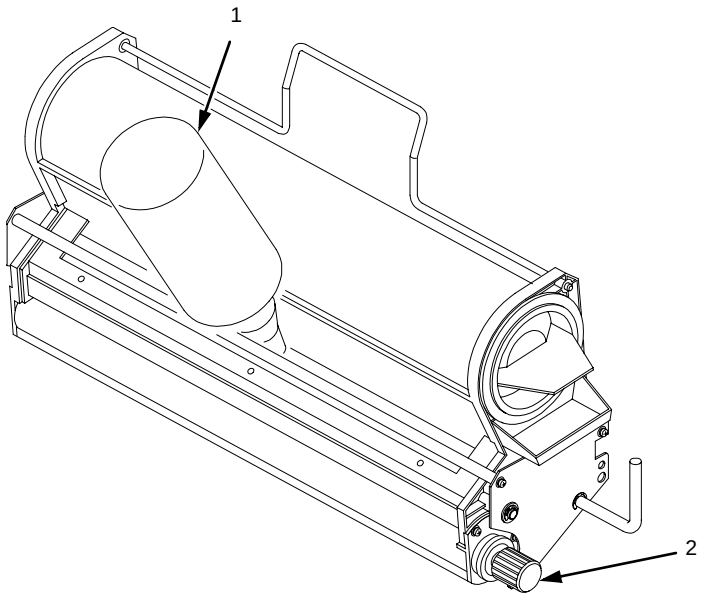
Legend:

1) Toner Hopper
2) Toner Spray-Guard Brush

10. Vacuum the toner from the toner spray-guard brush on the developing unit.

Adding New Developer

11. Shake the developer bottle several times, remove the bottle cap, and screw the nozzle tightly onto the bottle.
12. While rotating the new developing roller knob counterclockwise, evenly pour the entire bottle of developer powder into the developing unit.

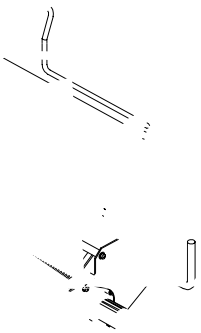


Legend:

1) Bottle of new Developer
2) Developing Roller Knob

13. Replace the cover and tighten the screws.

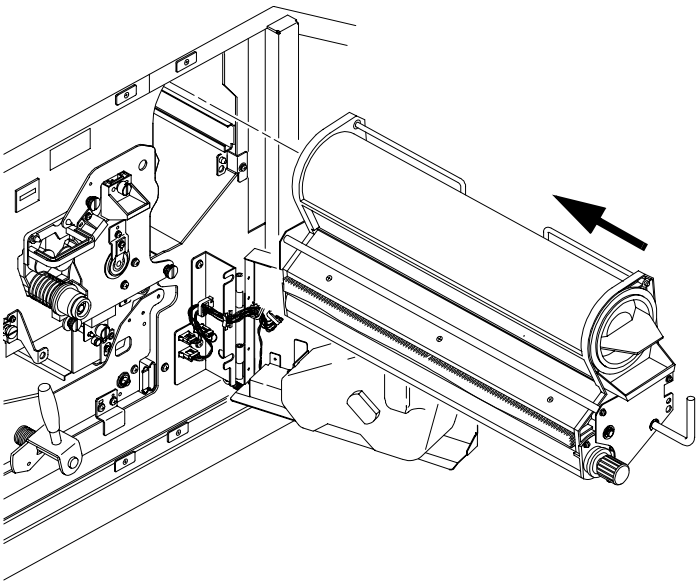
IMPORTANT **If toner or developer spills on clothing, use cold water to remove it.**



ı one hand and the hanger in the other hand,
ng unit on the guide rail.

to the right so that it rests against the
nd push the developing unit in.1

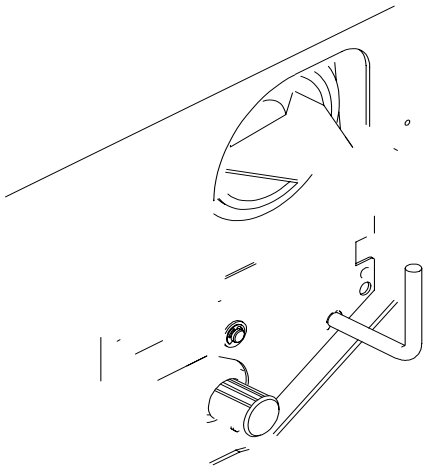
17. Rotate the developing roller knob counterclockwise until the unit drops into its final resting position. The developing unit lever should protrude through the main body of the developing unit.



Legend:

1) Lever
2) Developing Roller Knob

18. Rotate the developing unit lever fully counterclockwise to lock the developing unit in place.



Legend:

1) Lever

19. Close the waste toner recovery unit and ensure that it latches.
20. Close the printer upper doors.

4 *Scheduled Maintenance*

Required Tools

In maintain on the printer, the following tools are required:

Table 1. Required Maintenance Tools

Item	Part Number
Brush cleaner	703531-169
Drum auxiliary rod	703531-170
Drum freshener pad	703531-171
Fuser cover glass scraper	703531-187
Special dry tissue paper	703531-188
Standard toner vacuum cleaner	See below for recommended models
Toraysee cloth	703531-183
Wire cleaner	703531-168
9 inch Phillips #1 screwdriver	N/A

Recommended toner vacuum cleaner models are:

- 3M® model 497-AJM standard VAC with Type 1 filter
- 3M model 497-AB 220V with Type 1 filter
- Hitachi® CV-TN10 with TN-15 filter

Service Level Page Counts

IMPORTANT

Keep a record of all maintenance done to your printer. Maintenance log sheets are provided in Appendix A. Photocopy the pages and keep your maintenance log in a binder near the printer. Every time you or your service provider do printer maintenance make an entry in the log.

Each time you complete a level of preventive maintenance, you must reset the service level page count by selecting the User Maintenance option on the Maintenance menu. Levels A, B, and C are your responsibility, while levels D through H are the responsibility of your service provider.

When the page count reaches the number shown on the maintenance intervals listed below, the control panel displays one of the following messages:

User Maint Level *X*	(User)
Tech Service Level *X*	(Service Technician)

Service Level *X* represents the level of service required:

- Level A= every 15,000 pages
- Level B= every 150,000 pages
- Level C= every 600,000 pages
- Level D= every 300,000 pages
- Level E= every 600,000 pages
- Level F= every 900,000 pages
- Level G= every 1,200,000 pages
- Level H= every 2,400,000 pages

A service level includes all the levels that precede it. For example, at 150,000 pages, you do Level B *and* Level A service.

At 900,000 pages, your service provider should perform Level F, Level E, *and* Level D service.

Note that this condition does not cause the printer to stop printing. When one of the above messages appears, you should perform the appropriate scheduled maintenance or call your factory-trained service representative to perform the maintenance.

Clearing Service Level Messages

When you have performed a level of service, clear the page count for that service level. Note that when you clear a service level, the levels above it are also cleared. For example, clearing level C also clears levels A and B.

To clear a service level (level A, for example), select the Maintenance menu from the control panel, select the User Maint option, then select “Clear Level A” by pressing ENTER.

Maintenance Schedules

User Cleaning Schedule

Each time you do maintenance, you must reset the service level page count by selecting the User Maintenance option on the Maintenance menu. This removes the maintenance error message.

Do the following actions after the specified number of letter size pages have printed. Appendix A, “Maintenance Log Sheets,” contains log sheets to be photocopied for your use.

Table 2: User Responsibility

Action	Frequency (Pages)	Service Level
General cleaning	15,000; See Note 1	A
Major cleaning	150,000	B
Note 1: Every 15,000 pages or 6 paper jams, whichever occurs first.		

User Replacement Schedule

Replace the following items after the specified number of letter size pages (4% coverage) have printed. Appendix A, “Maintenance Log Sheets,” contains log sheets you can photocopy.

Table 3. Parts You Must Replace

Item	Part Number	Frequency (Pages)	Service Level
Toner cartridge	703532-001	21,000 See Note 1	As Needed
Waste toner bottle	202984-001	150,000 See Note 2	As needed
Photoreceptor drum	703535-001	150 - 300,000 See Note 3	B (as needed)
Developer	703548-001	150,000	B
Developing Unit	705739-001	600,000	C

Note 1: Replace when the “Toner Empty” message displays. A guideline for the replacement is 21,000 pages (A4 size, 4% coverage).
Note 2: Replace when the “Waste Toner Full” message appears. A guideline for the replacement is every 90,000 pages (A4 size, 4% coverage).
Note 3: Inspect every 150,000 pages; clean if needed. Replace at 300,000 pages or sooner if print quality is no longer acceptable. Drum life depends upon media used and proper maintenance and operation of the printer. Print media other than bond paper (e.g. labels, card stock, plastic or vinyl) can reduce drum life as much as 50%.

General Cleaning

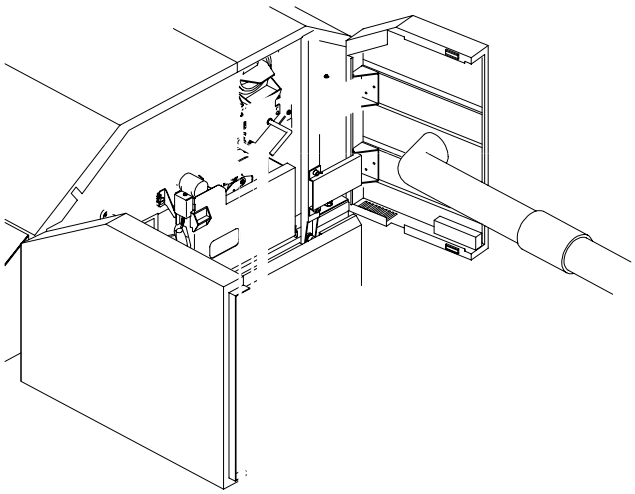
For the best print quality, clean the printer every 10,000-20,000 sheets and after high density print jobs.

CAUTION **Due to the high temperature of the flash fusing unit, keep the area under the fuser free of paper debris.**

Vacuuming The Printer

Following is the general cleaning procedure:

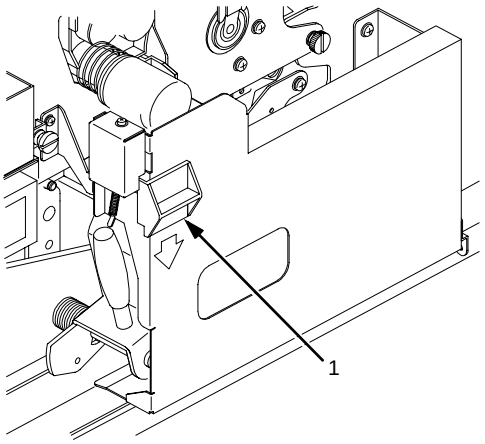
1. Set the power switch to O (Off).
2. Open the printer upper doors.
3. Using a vacuum, clean up the toner, paper dust, etc. inside the upper doors.



Legend:

1) Upper Door
2) Vacuum

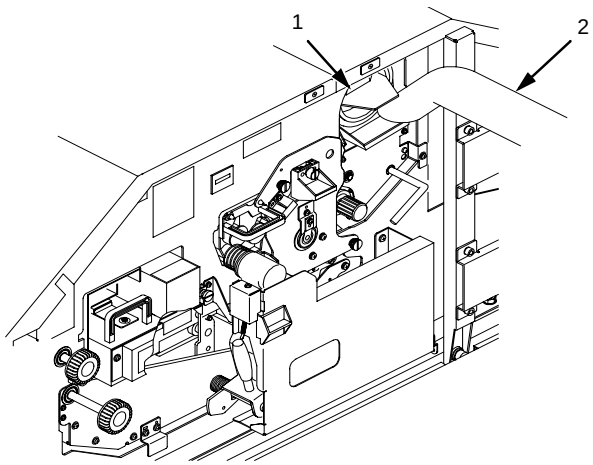
4. On the waste toner recovery unit, press the handle down and pull the handle toward you and open the unit.



Legend:

1) Handle

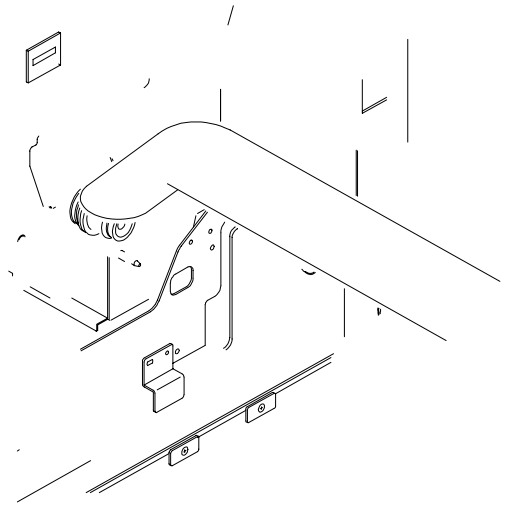
5. Vacuum the developing unit and toner hopper.



Legend:

1) Developing Unit and Toner Hopper
2) Vacuum

6. Vacuum the cleaning unit.



Legend:

1) Cleaning Unit
2) Vacuum

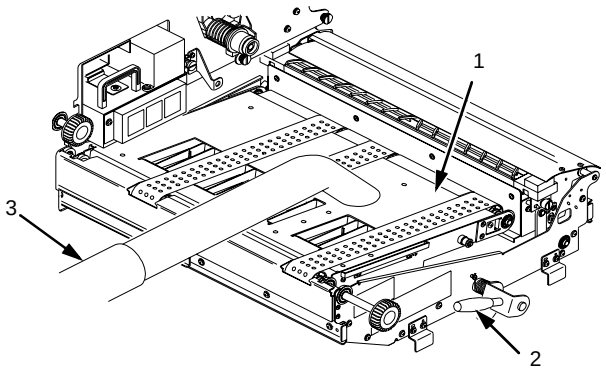
7. Vacuum the fuser unit.
8. Vacuum the lamp housing filter on the end of the fuser unit.

Legend:

1) Fuser Unit
2) Vacuum 21

CAUTION **The transfer charger must be in the down position to avoid scratching the drum. Failure to perform steps 9 and 10 damages the drum.**

9. Check that the transfer charger is in the down position, and if not, move it to the down position by rotating the transfer elevator drive shaft counterclockwise. Watch the charger movement:
   a. If the charger starts to move up, it is already in the down position.
   b. If the charger starts to move down, continue to rotate the drive shaft until the charger reaches the complete down position.
10. Lower the transport surface by turning the green lever on the transport unit to the left.

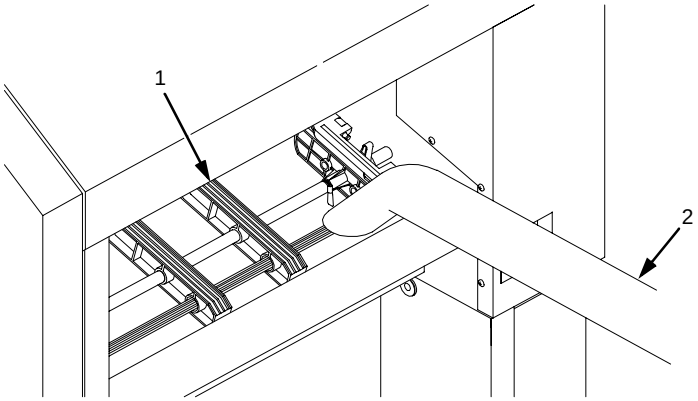


Legend:

1) Transport Surface
2) Green Lever
3) Vacuum

11. Pull the transport unit toward you until it stops.
12. Using a vacuum, clean up the toner, paper dust, etc. Be sure to clean under the transport unit as well.
13. Wipe off the dirt on the transport surface with wet tissue paper.

14. Using an ammonia-based wax-free cleaner or rubbing alcohol, clean the belts to remove residue buildup and restore their tacky surface.
15. Push the transport unit into the printer while holding down the green lever. When the transport unit is in position, raise the green lever to the right to raise the transport surface.
16. Using a vacuum, clean up the toner, paper dust, etc. in the tractor area.



Legend:

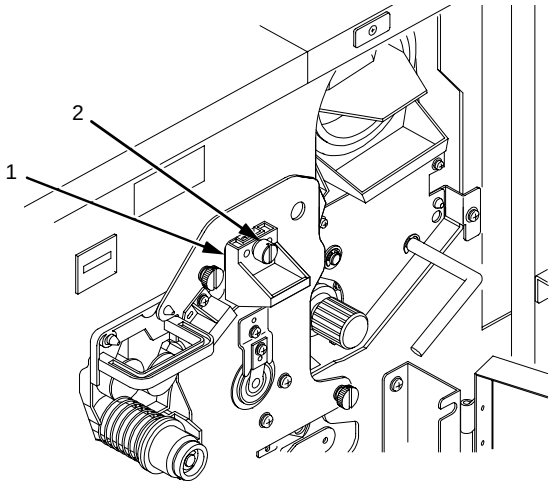
1) Tractor Area and Paper Guide
2) Vacuum

Cleaning The Chargers

1. Set the power switch O (Off).
2. Open the printer upper doors.

CAUTION **Use caution in handling to avoid damaging or breaking the charger wires.**

3. Loosen the thumbscrew and remove the main charger by pulling it toward you.

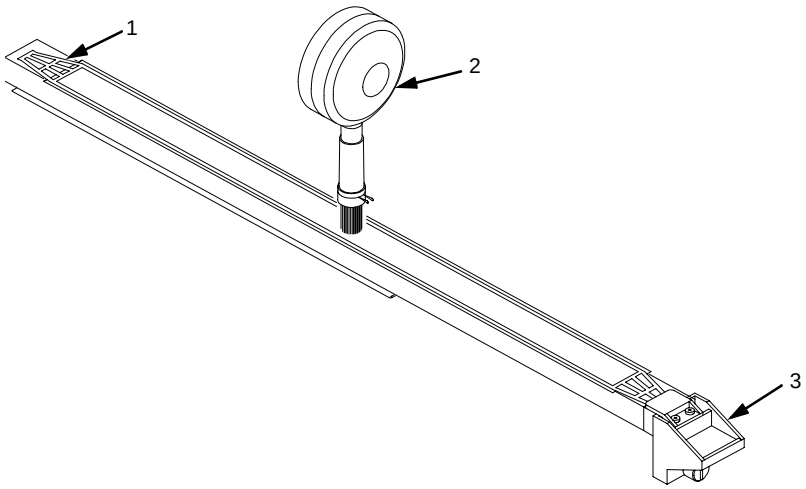


Legend:

1) Main Charger
2) Thumbscrew

4. Place the main charger on a flat, clean work surface.

5. Using the brush cleaner (listed on page 63), clean the exposed side of the charger grid and the body of the main charger.



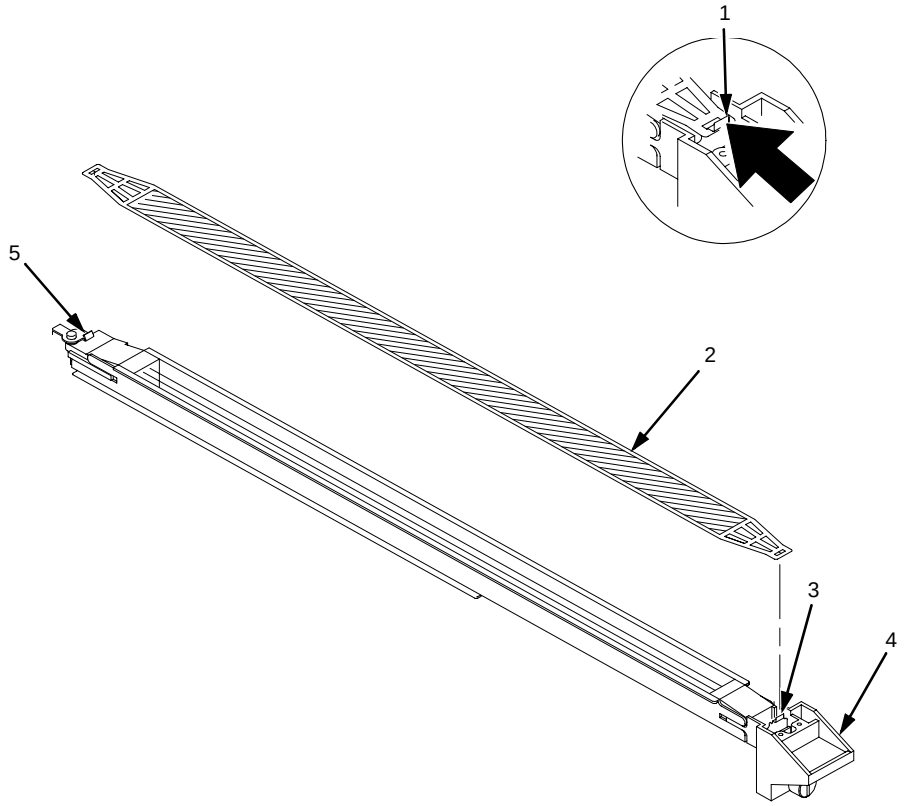
Legend:

1) Charger Grid
2) Brush Cleaner
3) Main Charger

6. Position the main charger with the charger grid up and the front of the charger toward you, as shown in the figure below. Refer to inset drawing in the figure, and remove the charger grid from the main charger as follows:

   a. While pressing the front retaining tab toward the rear of the charger, unhook the rear end of the charger grid from the rear retaining tab.

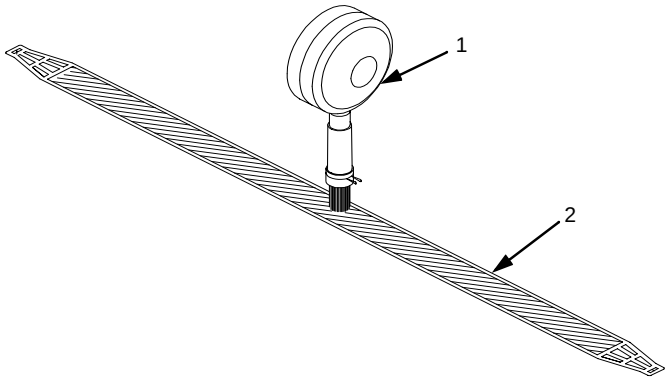
   b. Release the front retaining tab, then remove the charger grid from it.



Legend:

1) Front Retaining Tab (See Inset Drawing)
2) Charger Grid
3) Front Retaining Tab
4) Main Charger
5) Rear Retaining Tab

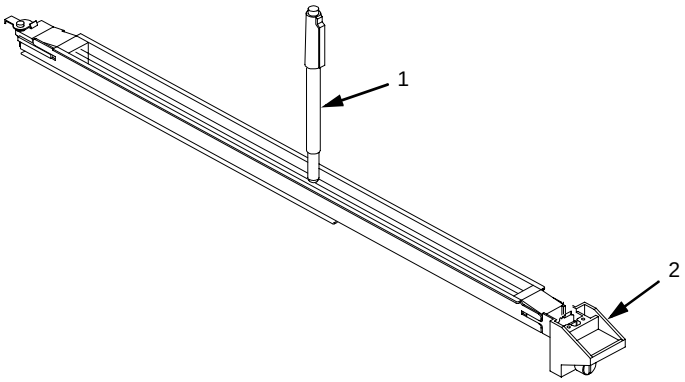
7. Using the brush cleaner (listed in Table 1 on page 63), clean both sides of the charger grid, as shown below.



Legend:

1) Brush Cleaner
2) Charger Grid

8. Using the wire cleaner (listed in Table 1 on page 63), clean the two wires in the main charger, as shown below. Be sure that both wires are cleaned thoroughly. When dirt is caked on, the wires feel gritty. When clean, the wires feel smooth.



Legend:

1) Wire Cleaner
2) Main Charger

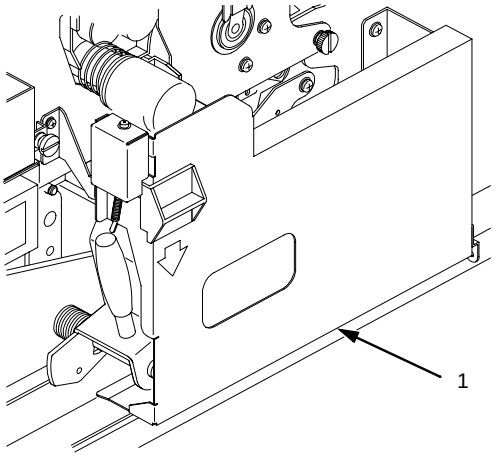
9. Install the charger grid.

10. Return the main charger to its original position. Fasten the main charger screw to secure it.

Precharger/Transfer Charger

CAUTION **Use caution in handling to avoid damaging or breaking the charger wires.**

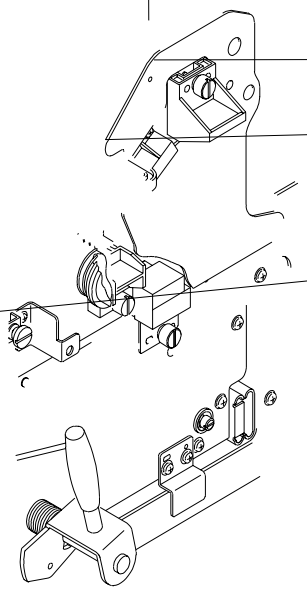
11. Open the waste toner recovery unit.



Legend:

1) Waste Toner Recovery Unit

12. Loosen the precharger thumbscrews, and transfer/separator charger thumbscrew, and pull the chargers out of the printer.



Legend:

1) Precharger
2) Transfer/Separator Charger
3) Thumbscrews

13. Place the chargers on a flat, clean work surface.
14. Using the brush cleaner and the wire cleaner (listed in Table 1 on page 63), remove the dust and dirt on the wires. When dirt is caked on, the wires feel gritty. When clean, the wires feel smooth.
15. Install the chargers. Fasten the charger screws to secure them.

Cleaning The Fuser Unit Cover Glass

WARNING **The fuser unit remains hot after operation. Wait until it has *completely* cooled down before handling it.**

WARNUNG

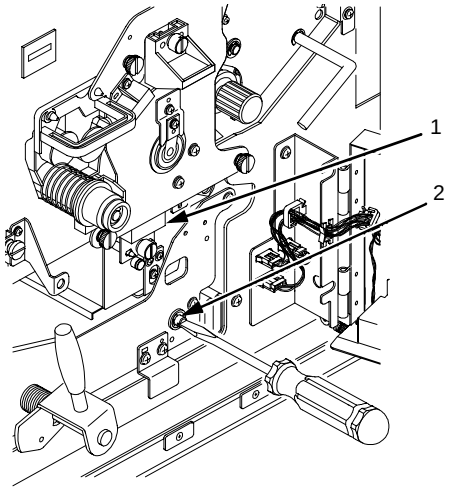
Die Einbrennvorrichtung behält auch nach dem Betrieb ihre Temperatur bei. Fassen Sie sie erst an, wenn sie *vollständig* abgekuhlt ist.

AVISO

La unidad de fusor estará a alta temperatura después de funcionar. Espere a ´e aen fre d4ndig

CAUTION **The transfer charger must be in the down position to avoid scratching the drum. Failure to perform steps 4 and 5 damages the drum.**

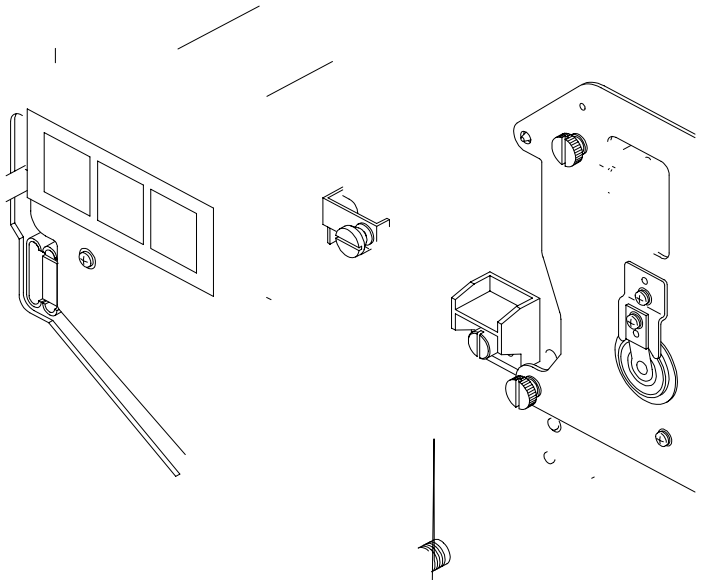
4. Check that the transfer charger is in the down position, and if not, move it to the down position by rotating the transfer elevator drive shaft counterclockwise. Watch the charger movement:
   a. If the charger starts to move up, it is already in the down position.
   b. If the charger starts to move down, continue to rotate the drive shaft until the charger reaches the complete down position.



Legend:

1) Transfer Charger
2) Transfer Elevator Drive

5. Lower the transport surface by turning the green lever on the transport unit to the left.



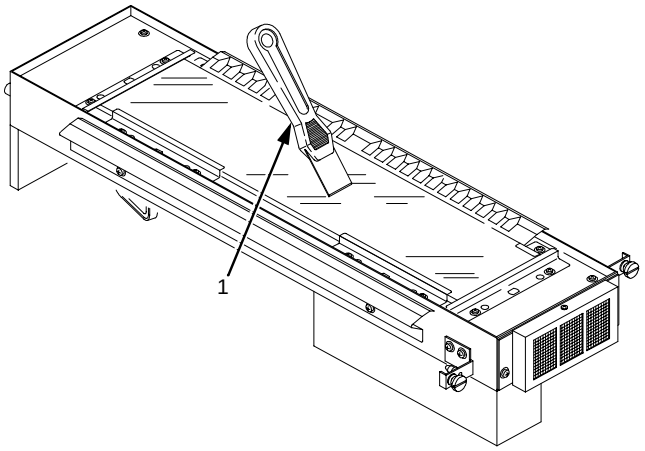
Legend:

1) Holding Plate
2) Thumbscrew
3) Green Lever
4) Fuser Unit
5) Thumbscrew (not visible in figure)
6) Handle

6. Loosen the thumbscrews on the right and left fuser unit holding plates.
7. Grasp the handle and pull out the fuser unit until the second handle is visible.
8. With the other hand, grasp the second handle and remove the fuser from the printer.

CAUTION **Do not scratch or place your hands directly on the cover glass. Fingerprints on the cover glass or lamps will cause them to break.**

9. Place the fuser on a clean, flat surface with the cover glass facing up.
10. Using the fuser cover glass scraper (listed in Table 1 on page 63), remove the dirt and toner buildup on the cover glass surface.

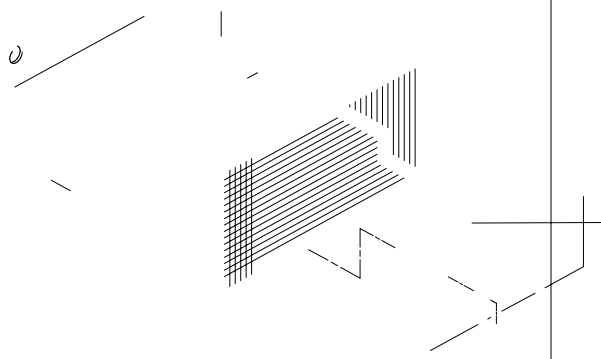


Legend:

1) Glass Scraper

11. Wipe away any remaining toner or dirt with a Toraysee cloth (listed in Table 1 on page 63).

12. Remove the two screws that secure the filter housing to the filter plate, then remove the filter.



Legend:

1) Filter Housing
2) Screws (2)
3) Filter
4) Filter Holding Plate
5) Fuser Unit

13. Vacuum the filter, then install it.
14. Vacuum any paper dust from the printer frame.
15. Install the fuser, making sure that the guide pins in the screw bracket align with the holes in the side frame of the printer.54321

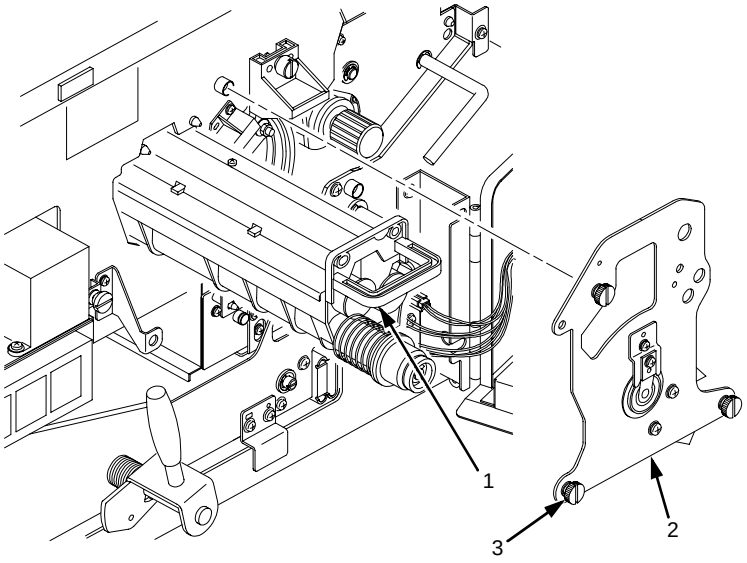
Major Cleaning

Removing Cleaning Unit

1. Turn the power switch to O (Off).
2. Open the printer upper doors.
3. Open the waste toner recovery unit by pushing downward on the opening lever and pulling the handle toward you to swing the unit outward and away from the printer.
4. Loosen the three thumbscrews securing the drum plate and remove the drum plate.

IMPORTANT **Do not turn the cleaning unit upside down, or toner might spill.**

5. Remove the cleaning unit by grasping its handle and pulling it toward you.

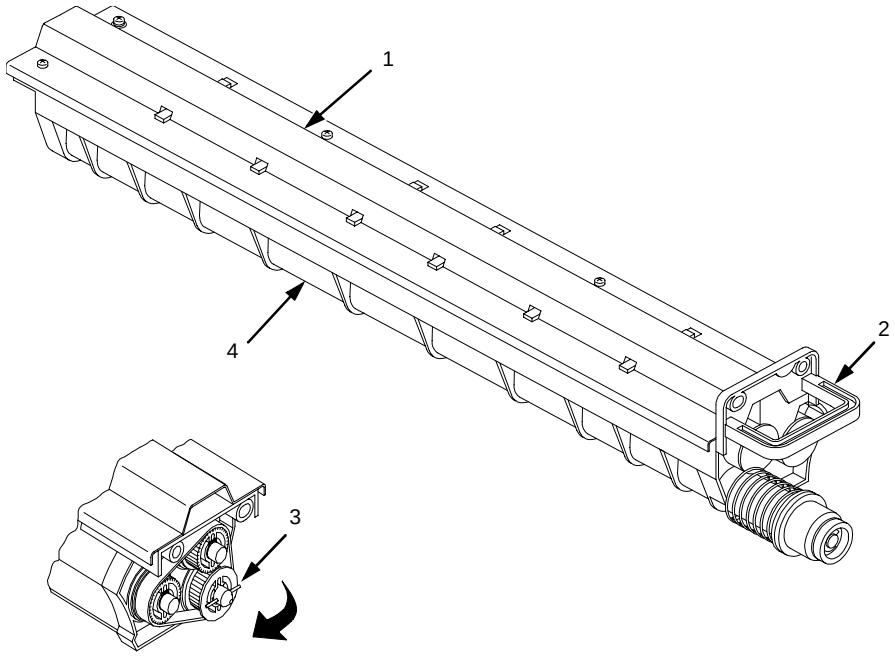


Legend:

1) Cleaning Unit Handle
2) Drum Plate
3) Thumbscrews (3)

CAUTION **Do not touch the brush surface with your hand.**

6. Vacuum the brush on the cleaning unit. Turn the end of the shaft to rotate the brush. Continue to rotate and vacuum the brush until the entire brush surface is clean.

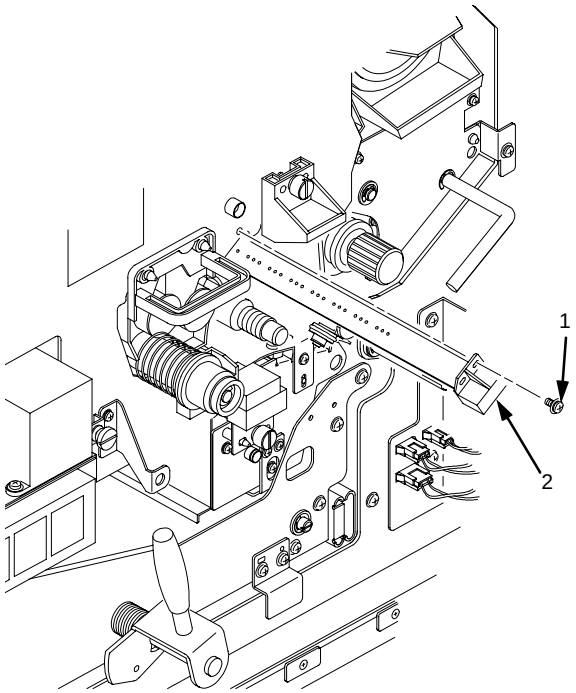


Legend:

1) Cleaning Unit
2) Cleaning Unit Handle
3) Rotate Shaft
4) Brush

CAUTION **Do not flex the discharge LED, as it may break.**

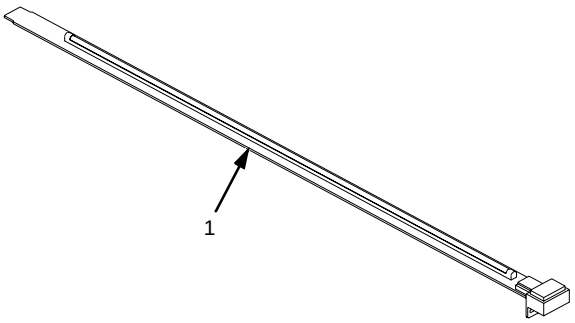
7. Remove the screw (1) holding the LED bracket to the side frame.
8. Remove the discharge LED by pulling it toward you.
9. Remove the discharge LED screw.



Legend:

1) Screw
2) Discharge LED

10. Using a Toraysee cloth (listed in Table 1 on page 63), wipe off the dirt on the discharge LED.



Legend:

1) Discharge LED

11. Install the discharge LED.
12. Remove the developing unit from the printer. (See page 42.)

Cleaning The Photoreceptor Drum

CAUTION **When cleaning the photoreceptor drum, observe the following precautions:**

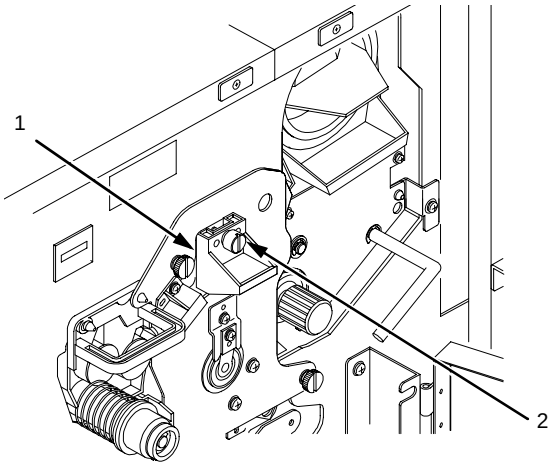
- **To prevent the drum surface from becoming contaminated or scratched, clean the drum only in a location that is free of dust.**
- **Cleaning the drum may cause wiping stains to be left on the surface of the drum. Stained areas of the drum may deteriorate if the drum is left unused in the printer for a long time after cleaning. Thus, after cleaning and installing the drum in the printer, use maximum size paper to print an image repeatedly until no stains remain. Stains will usually be cleared after printing a few dozen pages.**
- **Avoid touching the surface of the drum with your hands, which reduces the life of the drum.**

13. Remove the photoreceptor drum from the printer. (See page 42.)
14. Place the drum on a covered work surface.
15. If the drum is only slightly dirty, clean it with ethanol or isopropyl alcohol. **Do not use acetone.**
16. If the drum has toner buildup, clean it with the drum freshener pad (listed in Table 1 on page 63). Turn the drum little by little while polishing the drum surface with the freshener pad. Polish with a slight force in the direction of the drum circumference, using a circular motion. Let the polished areas slightly overlap each other, and polish the entire drum surface two or three times.

CAUTION **Press lightly when polishing the drum surface, as too much pressure can damage the drum.**

17. Using the special dry tissue paper (listed in Table 1 on page 63), thoroughly wipe the drum freshener off the drum surface.
18. Wipe the drum surface again using a Toraysee cloth (listed in Table 1 on page 63).
19. To avoid exposing the drum to light for too long, temporarily pack the drum in its original packaging material, and close the box cover. Set the drum aside for now. (You will install it later.)
20. Remove the drum auxiliary rod from the drum shaft.
21. Wipe the drum shaft clean with a cloth.

22. Loosen the thumbscrew and remove the main charger by pulling it toward you.



Legend:

1) Main Charger
2) Thumbscrew

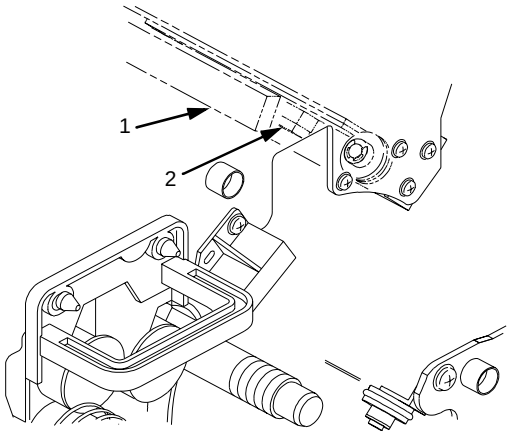
23. Clean the developing unit area with a vacuum cleaner and a soft cloth.

Cleaning The SELFOC® Lens

CAUTION **When wiping the SELFOC lens, do not to apply excessive force to the drum surface potential sensor near the SELFOC lens, as this can cause the sensor to be dislocated. (If this happens, contact your service representative.)**

24. Wipe the SELFOC lens by moving a Toraysee cloth (listed in Table 1 on page 63) from the inner part of the printer toward you. Wipe the lens until there is no more dirt on the cloth.

NOTE: Always wipe the SELFOC lens with the unused side of the Toraysee.



Legend:

1) SELFOC Lens
2) Drum Surface Potential Sensor

25. Install the main charger.
26. Install the photoreceptor drum. (See page 42.)
27. Install the developing unit. (See page 42.)
28. Install the cleaning unit.

5 *Troubleshooting*

Troubleshooting

This chapter discusses diagnostic tests, paper jams, and status and error messages.

Maintaining Print Quality

To maintain good print quality, clean the printer according to the schedules and information listed in this chapter.

1. Perform a General Cleaning (page 151).

NOTE: Recommended toner vacuum cleaner models are listed on page 63.

2. Clean the main charger, precharger, and transfer charger. For cleaning instructions, see page 73 for the main charger, and for the precharger and transfer charger.
3. If print quality problems occur, clean the following areas (see for tool part numbers):

- Clean the drum with the drum freshener (only when smears appear on print samples due to the drum).
- Clean the LED array and the SELFOC® lens (LED print head) with the Toraysee™ cloth.
- Clean the fuser cover glass with a razor blade or the cover glass scraper.

Contact your authorized service representative for further assistance. For replacement intervals, see the maintenance schedules that begin on page 120.

NOTE: If the desired print quality is not attained after cleaning the printer, the chargers may need to be replaced.

Diagnostics

The printer includes diagnostic circuits and software to aid in the discovery, prevention, and correction of system problems and failures.The printer has both offline and on-line diagnostics.

Offline Diagnostics

Most of the software diagnostics are executed when the printer is powered on, and when you request diagnostic information through the control panel.

Each time the printer is powered on, it performs a power-on self test. There is no printout during this test. However, the printer displays any errors on the control panel, accompanied by an audible alarm.

You may request the following diagnostic and configuration information via the control panel, through various menus:

- Test Print: Prints various predefined graphics pages to verify that the printer can print properly on the entire page (Test Print menu).
- Print Statistics: Displays all accumulated print engine statistics, such as number of pages printed and power-on time. This is a display-only feature; there is no printout (Print Statistics menu).
- Print Configuration: Prints all current configuration parameters in the printer, including print statistics (Config. Control menu).

Online Diagnostics

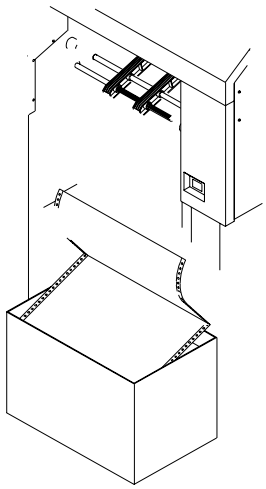
When it is online, the printer senses and reports problems or conditions as they arise. When an error is detected, the printer halts, lights the appropriate LED, and displays the proper error message on the control panel. The error message remains displayed until the error condition is cleared and you press CLEAR.

After the error is cleared, the printer reprints any pages that were not ejected prior to the error, provided the Reprint on Fault option is enabled.

Paper Jams

Paper Jam Near The Tractor

1. Raise the tractor gates.
2. Pull out the jammed paper. If the end of the paper is crumpled, tear it away from the perforation.
3. Reload the paper. The first fold of the paper should face the printer; otherwise, a paper jam could occur during printing (see illustration). Do not push the paper past the tractors as there is a paper jam sensor that will sense the paper and return a paper jam error.

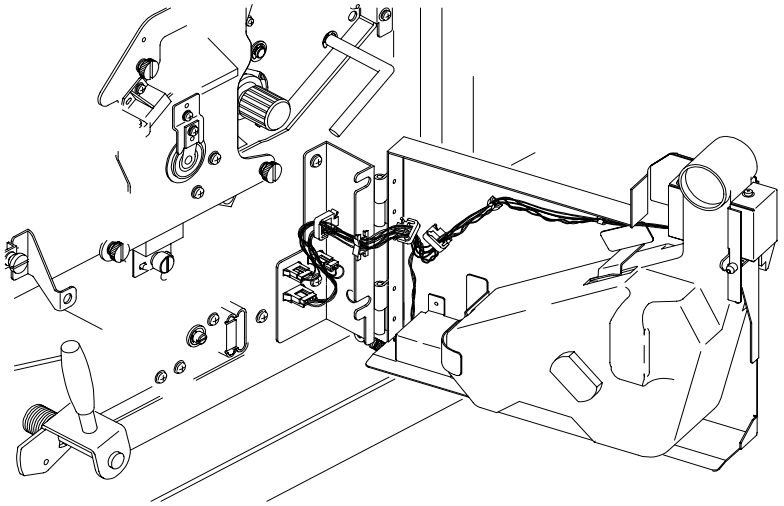


Legend:

1) Left Tractor
2) Right Tractor

Paper Jam Near The Paper Output Section

1. When paper motion stops, wait 15 seconds, then open the upper doors.
2. Push down on the opening lever of the waste toner recovery unit and pull to swing the unit outward away from the printer.

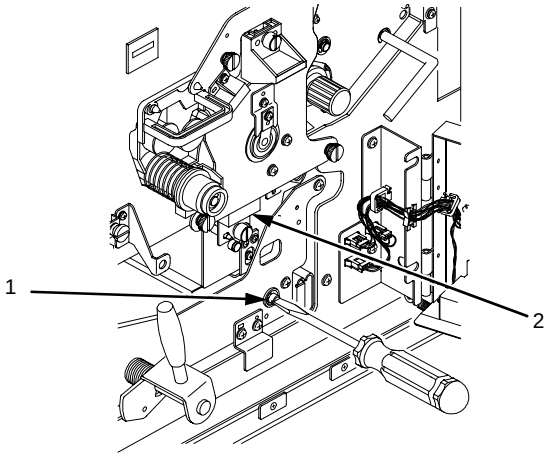


Legend:

1) Opening Lever
2) Waste Toner Recovery Unit

CAUTION **The transfer charger must be in the down position to avoid scratching the drum. Failure to perform steps 3 and 4 damages the drum.**

3. Rotate the transfer elevator drive shaft counterclockwise. Watch the charger movement:
   a. If the charger starts to move up, it is already in the down position.
   b. If the charger starts to move down, continue to rotate the drive shaft until the charger reaches the fully down position.

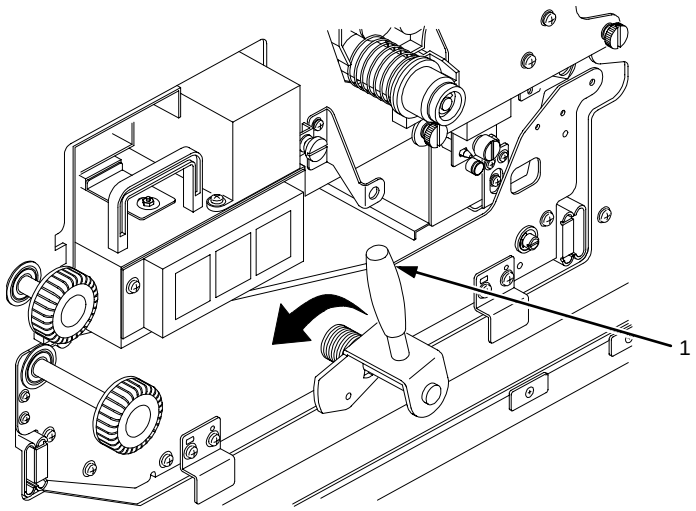


Legend:

1) Transfer Elevator Drive Shaft
2) Transfer Charger

CAUTION **To avoid damaging the printer or causing false paper jams, the transport lever must be in the fully down position before opening the transport unit.**

4. Lower the transport unit by turning the green lever on the transport unit to the left.

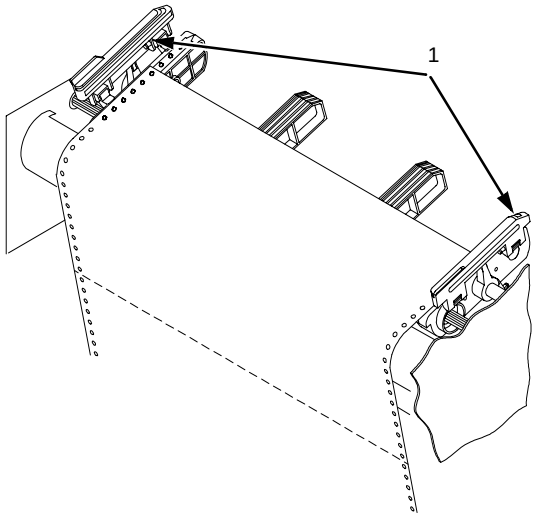


Legend:

1) Green Lever

5. Check to see if any paper is jammed.

7. Separate the fanfold paper at the perforations. Then remove the jammed paper. When removing the paper from the paper *input* section, raise the tractor gates first, then pull out the jammed paper.



Legend:

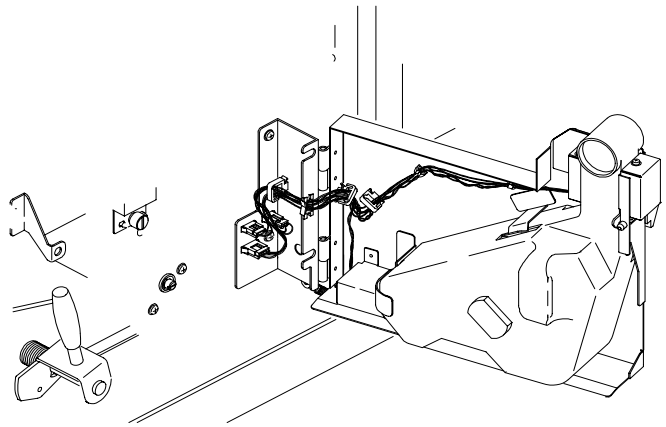
1) Tractor Gates

CAUTION **To avoid damaging the printer or causing false paper jams, the transport lever must be in the fully down position before closing the transport unit.**

8. After removing the pieces of jammed paper, restore the transport unit and waste toner recovery unit to their original positions, and close the upper doors.
9. Load the paper.

Paper Jam In The Transport Input Section

1. When paper motion stops, wait 15 seconds, then open the upper doors.
2. Open the waste toner recovery unit cover, and pull the unit toward you.

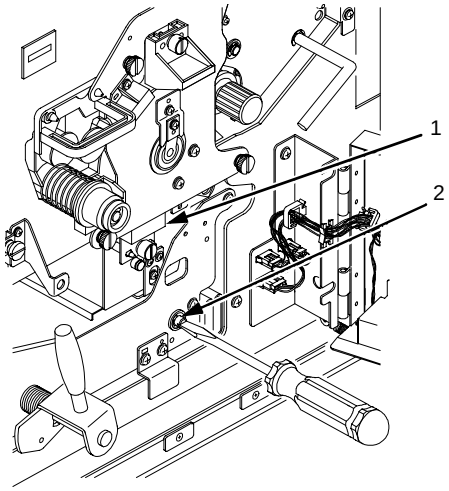


Legend:

1) Opening Lever
2) Waste Toner Recovery Unit

CAUTION **The transfer charger must be in the down position to avoid scratching the drum. Failure to perform steps 3 and 4 damages the drum.**

3. Check that the transfer charger is in the down position, and if not, move it to the down position by rotating the transfer elevator drive shaft counterclockwise. Watch the charger movement:
   a. If the charger starts to move up, it is already in the down position.
   b. If the charger starts to move down, continue to rotate the drive shaft until the charger reaches the complete down position.

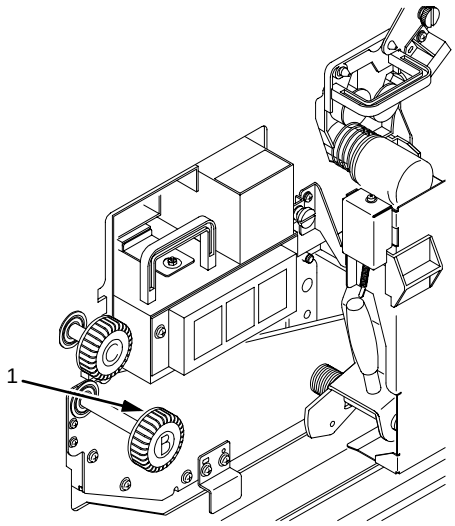


Legend:

1) Transfer Charger
2) Transfer Elevator Drive

Paper Jam In The Transport Output Section

1. When paper motion stops, wait 15 seconds, then open the upper doors.
2. Turn the green knob B counterclockwise. This causes the jammed paper to be moved to the paper feed section. Remove any jammed paper.



Legend:

1) Knob B

3. Lower the paper guide by restoring the bottom lever to its original position. Close the upper doors.

System Status And Error Messages

When an error occurs, the printer displays a message on the control panel LCD. Some errors are operator-correctable, some require field service, and others require reprinting.

Operator-correctable errors include paper jams, and missing consumables. After correcting the error condition, press CLEAR to remove the message from the display and place the printer offline. If any data resides in the print buffer, it is then printed. Press ONLINE to place the printer online.

Errors requiring field service are printer failures that require the attention of service personnel. Before calling your service representative, press CLEAR to attempt to remove the message from the display. If the message disappears, the original message may have been a false error indication. If the message reappears, call for service.

Errors requiring reprinting are those errors which require reprinting to recover from an error condition. These are discussed in detail in the following topics.

Reprinting Pages After Fault Condition

The printer handles errors in two ways, depending on your configuration of the Reprint on Fault option in the Paper Control menu.

If Reprint On Fault Is *Enabled* (The Default):

- Any pages left in the printer at the time of failure are reprinted. No data is lost.
- Fanfold paper: the printer reprints all pages that have not completely exited the printer at the time of failure. The exact number of pages that are reprinted is determined by the length of the page and where within the page the fault occurred.

If Reprint On Fault Is *Disabled:*

- Any pages left in the printer at the time of failure are not reprinted. Data is lost (you need to reprint the lost pages according to your application software).

If Reprint On Fault Is *Confirm:*

- The control panel on the printer returns a message asking whether or not to reprint. Answer Yes to reprint, answer No if a reprint is not necessary.

Whether Reprint On Fault Is *Enabled, Disabled*, Or *Confirm:*

- After a paper jam, you may need to reload the paper onto the tractors.

“Error Messages,” Table 4, starting on page 111, designates those errors that require reprinting to recover from an error condition.

NOTE: Some errors require reprinting, regardless of your printer configuration. Refer toTable 4 for details.

Clearing A Fault When Reprint On Fault Is *Disabled*

1. A fault occurs.
2. Do what is necessary to correct the fault condition.
3. Press CLEAR.
4. The STANDBY LED blinks and the following message appears while the printer attempts to clear the fault:

   ```
   Standby ...
   Clearing Fault
   ```

- If the fault is not cleared:

  a. The printer beeps and briefly displays the following message:

   ```
   Faults Not Cleared
   ```

b. The printer then redisplays the original fault message, or any other uncleared fault message.

c. Attempt to clear the fault condition again, or contact your service representative.

- If the fault is cleared, and if you do *not* need to reload the paper into the tractors (for example, the printer ran out of toner):

  a. The printer goes OFFLINE.

  b. Press ONLINE to resume printing.

- If the fault is cleared, and if you need to reload paper into the tractors (such as after a paper jam), the following message appears:

  ```
  Reload Paper
  in Tractors
  ```

  a. Reload the paper onto the tractors.

  b. Press CLEAR.

  c. Press ONLINE to resume printing. *Note that pages have been lost.*

- If the fault is cleared, and if you already have reloaded the paper while clearing the fault condition (in Step 2), the following message appears:

  ```
  Not Reprinting
  Failed Pages
  ```

Press ONLINE to resume printing. *Note that pages have been lost.*

IMPORTANT **If Reprint on Fault is *disabled* and an error occurs, and if the "RELOAD PAPER IN TRACTORS" or "NOT REPRINTING FAILED PAGES" message appears, then any pages removed from the printer are not reprinted, and the data for them is lost.**

Clearing A Fault When Reprint On Fault Is *Enabled*

1. A fault occurs.
2. Do what is necessary to correct the fault condition.
3. Press CLEAR.
4. The STANDBY LED blinks and the following message appears while the printer attempts to clear fault:

Standby ... Clearing Fault

- If the fault is not cleared:
  a. The printer beeps and briefly displays the following message:

Faults Not Cleared

  b. The printer then redisplays the original fault message, or any other uncleared fault message.
  c. Attempt to clear the fault condition again, or contact your service representative.
- If the fault is cleared, and if you do *not* need to reload the paper into the tractors (for example, the printer ran out of toner):
  a. The printer goes OFFLINE.
  b. Press ONLINE to resume printing.

- If the fault is cleared, and if you need to reload paper into the tractors (such as after a paper jam), the following message appears:

  ```
  Clear Paper Path
  for Reprint
  ```

  a. Reload the paper onto the tractors.

  b. Press CLEAR. The printer reprints only the pages affected by the fault (even though the message display reads “OFFLINE").

  c. Press ONLINE to resume printing. If the fault is cleared, and if you already have reloaded the paper while clearing the fault condition (in Step 2), the following message appears:

  ```
  Reprinting
  Failed Pages
  ```

  a. The printer reprints only the pages affected by the fault.

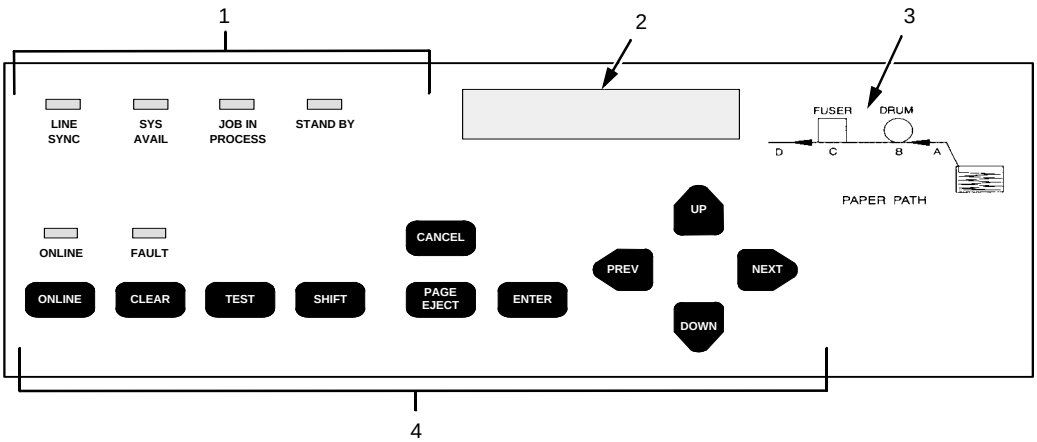
  b. Press ONLINE to resume printing.

Error Messages

Table 4, on page 111, lists errors by error code and shows which are operator-correctable, which require field service, and which require reprinting.

- *Operator-correctable errors* include paper jams, and missing consumables.
- *Errors requiring field service* are printer failures that require the attention of service personnel.
- *Errors requiring reprinting* are those errors which require reprinting to recover from an error condition.

NOTE: The letter designations (A-D) following the “PAPER JAM” error messages match the sensor positions indicated on the control panel, as shown in the following illustration.



Legend:

1) Status Indicators
2) Liquid Crystal Display (LCD)
3) Sensor Positions A -D
4) Function Keys

Table 4. Error Messages

Error Code	Error Message	Operator Correctable	Field Service Required	Reprint Required
01	FRONT COVER OPEN	✓		See Note 3 and 6
08	CUT-SHEET PATH OPEN			
6C	CUT-SHEET COVER OPEN			
02	FANFOLD PAPER EMPTY	✓		See Note 4
66	NO PAPER TRAY	✓		✓
6F	CUT SHEET PAPER EMPTY	✓		✓
03	PAPER JAM AT FUSER (C)	✓		✓
04	PAPER JAM AT EXIT (D)	✓		✓
05	PAPER JAM AT EXIT (D)	✓		✓
0E	PAPER JAM AT EXIT (D)	✓		✓
0F	PAPER JAM AT EXIT (D)	✓		✓
10	PAPER JAM AT EXIT (D)	✓		✓
11	PAPER JAM AT DRUM (B)	✓		✓
12	PAPER JAM AT FUSER (C)	✓		✓
13	PAPER JAM AT EXIT (D)	✓		✓

Table 4. Error Messages

Error Code	Error Message	Operator Correctable	Field Service Required	Reprint Required
16	PAPER JAM AT ENTRANCE (A)	✓		✓
1B	PAPER JAM AT ENTRANCE (A)	✓		✓
64	PAPER JAM AT ENTRANCE (A)	✓		✓
65	CUT SHEET PICK MISS		✓	✓
67	PAPER JAM AT ENTRANCE (A)	✓		✓
68	PAPER JAM AT ENTRANCE (A)	✓		✓
69	PAPER JAM AT ENTRANCE (A)	✓		✓
6A	PAPER JAM AT ENTRANCE (A)	✓		✓
6B	PAPER JAM AT ENTRANCE (A)	✓		✓
73	PAPER JAM AT ENTRANCE (A)	✓		✓
09	TRANSPORT MOTOR FAIL		✓	✓
14	TRACTOR MTR FWD SPEED ERR		✓	✓
15	TRACTOR MTR BKWD SPEED ERR		✓	✓
0A	CUTTER FAIL		✓	

Table 4. Error Messages

Error Code	Error Message	Operator Correctable	Field Service Required	Reprint Required
0B	CUTTER FAIL		✓	
18	DRUM MOTOR FAIL		✓	
19	SURFACE VOLTAGE TOO HIGH		✓	
1A	SURFACE VOLTAGE TOO HIGH		✓	
1D	SURFACE VOLTAGE FAIL		✓	
18	DRUM MOTOR FAIL			
1E	FUSER SUPPLY FAIL		✓	
1F	FUSER FAILURE		✓	
20	FUSER LAMP OVERHEAT		✓	
21	FUSER FAN FAIL		✓	
22	EXHAUST FAN FAIL			
26	NO CLEANING UNIT	✓		
27	NO DEVELOPER UNIT			
28	WASTE TONER FULL	✓		
29	NO WASTE TONER BOX	✓		
2A	TONER LOW	See Note 5		
2B	TONER DENSITY TOO HIGH		✓	
2C	TONER DENSITY TOO LOW		✓	

Table 4. Error Messages

Error Code	Error Message	Operator Correctable	Field Service Required	Reprint Required
2D	TONER EMPTY	✓		
2E	DEVELOPER MOTOR FAIL			
32	LED HEAD OVERHEAT		✓	
36	LED FAIL		✓	
37	LED FAIL		✓	
38	ENGINE CPU FAIL		✓	
39	ENGINE CPU FAIL		✓	
3A	ENGINE CPU FAIL		✓	
3B	ENGINE CPU FAIL		✓	
3C	ENGINE CPU FAIL		✓	
3D	ENGINE CPU FAIL		✓	
3E	ENGINE CPU FAIL		✓	
3F	ENGINE CPU FAIL		✓	
40	ENGINE CPU FAIL		✓	
41	ENGINE CPU FAIL		✓	
42	ENGINE CPU FAIL		✓	
43	ENGINE CPU FAIL		✓	
44	ENGINE CPU FAIL		✓	
45	ENGINE CPU FAIL		✓	
46	ENGINE CPU FAIL		✓	
47	ENGINE CPU FAIL		✓	

Table 4. Error Messages

Error Code	Error Message	Operator Correctable	Field Service Required	Reprint Required
72	ENGINE CPU FAIL		✓	
48	CONTROLLER COMM. FAIL		✓	
49	CONTROLLER COMM. FAIL		✓	
4A	CONTROLLER COMM. FAIL		✓	
4B	CONTROLLER COMM. FAIL		✓	
4C	CONTROLLER COMM. FAIL		✓	
4D	CONTROLLER COMM. FAIL		✓	
4E	CONTROLLER COMM. FAIL			
50	STACKER FAIL		✓	
51	STACKER FAIL		✓	
52	STACKER FAIL		✓	
53	STACKER FAIL		✓	
54	STACKER INTERLOCK FAIL		✓	
55	STACKER FAIL		✓	
57	STACKER NOT READY	✓		
58	STACKER NOT READY	✓		✓
5A	STACKER FAIL		✓	

Table 4. Error Messages

Error Code	Error Message	Operator Correctable	Field Service Required	Reprint Required
5B	STACKER FAIL		✓	
5C	STACKER NOT READY	✓		✓
56	STACKER FULL			
06	NO TRANSFER UNIT		✓	✓
0C	TRANSFER PLATFORM FAIL		✓	✓
0D	TRANSFER PLATFORM FAIL		✓	✓
07	SCUFF LEVER OPEN	✓		
78	MAIN CHARGER ERROR		✓	✓
79	TRANSFER CHARGER ERROR		✓	✓
7A	PRE-CHARGER ERROR		✓	✓
7B	CLEANING BIAS ERROR		✓	✓
7C	DEVELOPING BIAS ERROR		✓	✓
7D	SEPARATOR CHARGER ERROR		✓	✓
	TRAY MISMATCH	✓		
5D	STACKER FAIL		✓	
5E	STACKER FAIL		✓	
5F	STACKER FAIL		✓	
	FILE SYS FULL DELETE FILES	✓		✓

Table 4. Error Messages

Error Code	Error Message	Operator Correctable	Field Service Required	Reprint Required
	FILE SYS FULL OPTIMIZE&REBOOT	✓		✓
	FILE SYS FULL ADD FLASH	✓		✓
	INSUFFICIENT RAM REBOOT/ADD RAM	✓		✓
	FILE EXISTS ENABLE OVERWRITE	✓		✓
	FILE SYS INVALID OPTIMIZE&REBOOT	✓		✓
	FILE SYS WRITE CHECK FLASH	✓		✓
	RELOAD PAPER PIN TRACTORS	✓		✓
	CLEAR PAPER PATH FOR REPRINT	✓		✓
	FRAMING ERROR		✓	✓
	PARITY ERROR		✓	✓
	BUFFER OVERRUN		✓	✓
	BUFFER OVERFLOW		✓	✓

TABLE NOTES:

1. For *any* error with Reprint on Fault enabled: If the printer stops while in the middle of printing a page, reloading the paper and reprinting are required. There may be other cases requiring reloading and reprinting; if so, a message appears.
2. For *any* error with Reprint on Fault disabled: If the printer stops while in the middle of printing a page, reloading the paper is required and pages are lost.
3. For error numbers 01, 14, and 15: If the error occurs while paper is *not* moving, it is not necessary to reload or reprint.
4. For error number 02: If the error is caused by a paper-empty at the lower sensor (Paper Near End Sensor), it is not necessary to reprint.
5. Status message only. No operator action required to clear message.

The Front Cover Open error can occur when either the Upper Doors or the Paper Output Door (as seen on page 36) is open. If the Upper Doors are closed, push the Paper Output Door in to release it to its down position.

A *Maintenance Log Sheets*

Maintenance Log Sheets

The maintenance log sheets are for your use. These may be photocopied and kept in a binder near the printer. Be sure to use them each time either you or your service provider perform printer maintenance.

Only maintenance levels A through C are presented in this *Operator's Guide.* These three levels are done by the user. Levels D through H are done by a service representative and are included in the *User's Manual.*

Appendix A Maintenance Log Sheets

Level A Maintenance - 15,000 Pages (User)

Action	Item	Part #	Performed By	Date
Clean	General cleaning	N/A		
Clean	Main charger	705741-001		
Clean	Precharger	705742-001		
Clean	Transfer charger	705743-001		
Clean See Note 1	Cover glass	N/A		
Replace See Note 2	Toner cartridge	703532-050		
Note 1: Every 15,000 pages or 6 paper jams, whichever occurs first. Note 2: The Toner cartridge should be replaced about every 21,000 pages or as needed (for page coverage of 4%)				

Level B Maintenance - 150,000 Pages (User)

Action	Item	Part #	Performed By	Date
Clean	General cleaning	N/A		
Clean	Main charger	705741-001		
Clean	Precharger	705742-001		
Clean	Transfer charger	705743-001		
Clean See Note 1	Cover glass	N/A		
Clean	SELFOC lens	N/A		
Vacuum	Lamp housing filter	202985-001		
Vacuum	Cleaning unit	705740-001		
See Note 2	Photoreceptor drum	703535-001		
Replace See Note 3	Toner cartridge	703532-001		
Replace	Developer	703548-001		
Replace See Note 4	Waste toner bottle	202984-001		

Note 1: Every 15,000 pages or 6 paper jams, whichever occurs first.
Note 2: Inspect every 150,000 pages; clean if needed. Replace at 300,000 pages or sooner if print quality is no longer acceptable. Drum life is dependent upon media being used and proper maintenance and operation of the printer. Print media other than bond paper (e.g., labels, card stock, plastic, or vinyl) may reduce drum life as much as 50%.
Note 3: The Toner cartridge should be replaced about every 21,000 pages or as needed (for page coverage of 4%).
Note 4: The waste toner bottle is replaced every 90,000 pages, so may not need to be replaced at this time.

Level C Maintenance - 600,000 Pages (User)

Action	Item	Part #	Performed By	Date
Clean	General cleaning	N/A		
Clean See Note 1	Cover glass	N/A		
Clean	SELFOC lens	N/A		
Clean	Flash power supply filter	N/A		
See Note 2	Photoreceptor drum	703535-001		
Replace	Developing Unit	705739-001		
Replace See Note 3	Toner cartridge	703532-001		
Replace	Waste toner bottle	202984-001		

Note 1: Every 15,000 pages or 6 paper jams, whichever occurs first.

Note 2: Inspect every 150,000 pages; clean if needed. Replace at 300,000 pages or sooner if print quality is no longer acceptable. Drum life is dependent upon media being used and proper maintenance and operation of the printer. Print media other than bond paper (e.g., labels, card stock, plastic, or vinyl) may reduce drum life as much as 50%.

Note 3: The Toner cartridge should be replaced about every 10,000 pages or as needed (for page coverage of 4%).

B *Specifications*

Paper Specifications

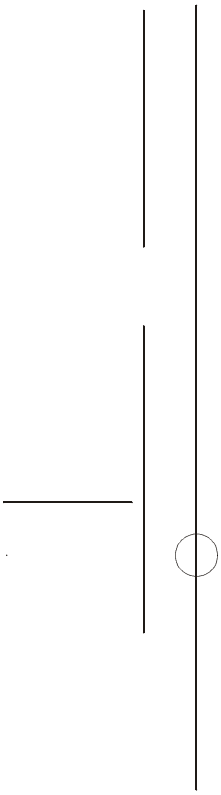
Paper type	Fanfold
Paper size	
Width	7 to 16 inches
Length*	1 to 30 inches, in multiples of 1/6 inch.

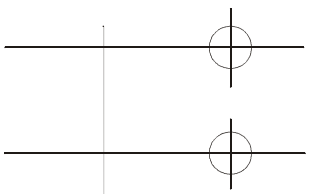
* Measured from main folding/cutting perforation to main folding/ cutting perforation.

Tractor pin holes	See the table and figure below.

Appendix B Paper Specifications

Specification	Inch	Millimeter	Dimension in Figure
Pin hole center to folding perforation	1/6, 1/4, 1/3, or 1/2	4.23, 6.35, 8.47, 1.20	8
Hole center line to edge of form	0.236 ± 0.028	6.0 ±0.1	1
Hole diameter	0.156 ± 0.004	4.0 ±0.1	N/A
Distance between centers of two consecutive holes	0.500 ± 0.002	12.7 ±0.05	5
Max. deviation of holes from their center line	0.004	0.1	6
Max. deviation Left Hand hole to companion Right Hand hole (Center Line to Center Line)	0.006	0.15	4
Max. parallel deviation Left Hand hole Center Line to Right Hand hole Center Line	0.006	0.15	N/A





Legend:

1) Hole centerline to edge of form
2) Center Line
3) Main Folding/Cutting Perforation
4) Centerline to Centerline
5) Distance between centers of two consecutive holes
6) Center Line Deviation
7) Tractor Pin Hole
8) Pin hole to perforation
9) Fanfold Paper1

Paper thickness	.010 inch maximum
Paper weight	18 to 44 lb. bond (68-165g/m^2), 44-125 lb. tag/label (75-204g/m^2)
Paper feed	Automatic paper parking mechanism incorporated
Maximum paper stack size	3000 sheets (18 lb.)
Folder Perforation	
Cut	0.12 inches or 3mm minimum
Cut to Tie	3:1 minimum

Performance Characteristics

Printing density	300 x 300 dpi 400 x 400 dpi or 240 x 240 dpi (options)
Printing speed	2.78 inches per second.

Paper Size	Orientation	Printing Speeds (Pages per Minute)
A4	Landscape	20
Letter	Landscape	20
A4	Portrait	15
Letter	Portrait	15

Maximum effective print width	14.7 inches

Duty cycle	200,000 total pages/month of fanfold paper (11-in. length)
Mechanical life	5 years or 12,000,000 pages (11-inch length)
Warm-up time	60 sec. max.
First page printing time	25 sec. max.
MTBF/MPBF	8,000 hours/2,880,000 pages (letter size) 25% print to power on ratio
MTTR	2 hour max. (unit exchange

Host Interfaces

Standard	Centronics parallel, Dataproducts parallel, serial RS-232/422

NOTE: Dataproducts parallel interface requires an optional adapter cable.

Optional	IBM coax and twinax Ethernet network adaptor

Emulations

Standard	LinePrinter Plus
Optional	PCL5/LP+ PCL5/PGL PCL5/VGL IGP/VGL IGP/PGL IPDS CTHI (if installed)

Memory Requirements

The L5000 series printers have 32 MB (standard) or 64 MB (optional) of RAM (Random Access Memory), and 8 MB (standard) or 16, 32, or 64 (optional) of Flash Memory. This is standard with all new printer shipments, and all upgraded printers.

Safety Regulations

UL	1950
CSA	950
EUROPE	EN 60950

Electromagnetic Interference

FCC	Class A
Europe	EN55022 Class A

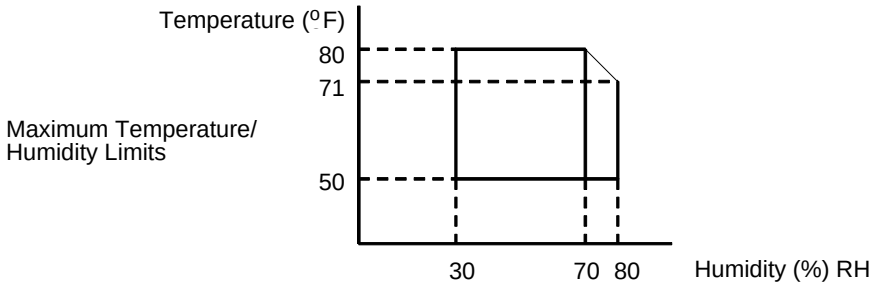
Physical Characteristics and Environment

Dimensions (H x W x D)	49 inch H x 30 inch W x 34 inch D In crate: 36 inches H x 58 inches W x 61 inches D
Weight	353 lbs. (or 441 lbs.) with options
Input voltage range	200 - 240 V ±10% 50/60 Hz (47 - 62 Hz) single phase
Power consumption	3300 W (operating); wall outlet *must* be on a 30-amp breaker.

Environment

Temperature	Operating: 50° to 80° F (10° to 27° C) Non-operating: 14° to 95° F(-10° to 35° C)
Humidity	Operating: 30 to 80% RH Non-operating: 10 to 80% RH (non-condensing)

Appendix B Physical Characteristics and Environment



Sound level

Operating	60 db (A-weighted) max. Full options
Standby state	50 dB (A-weighted)
Inclination	1° max.

Index

B

Buttons See Function keys, 29

C

CANCEL
  function key, 34
Caution notice, 17
Cleaning
  fuser unit cover glass, 79
  general, 68
CLEAR
  function key, 32
Clearing faults procedure
  with Reprint on Fault disabled, 106
  with Reprint on Fault enabled, 108
Clearing service level messages, 65
Consumables
  replacement intervals, 67
Control panel
  using, 29
Cover glass
  fuser unit cleaning, 79

D

Danger notice, 17
Developer replacing, 52
Diagnostics
  printer, 94
  offline, 94
  online, 94
Diagrams
  paper path, 29
Disk drives
  location, 27
Disposal
  photoreceptor drum, 48
DOWN
  function key, 34
Drum photoreceptor
  disposal, 48
  replacing, 42

E

Electromagnetic interference
  specifications, 128
Emulation specifications, 128
Emulations, 24
ENTER
  function key, 33
Environmental specifications, 129
Error messages, 105
Error messages table, 110
Errors
  operator-correctable, 105
  requiring field service, 105
  requiring reprinting, 105
Errors requiring field service, 105
Errors requiring reprinting, 105

Index

F

Fanfold paper jams, 95
FAULT
    status lamp, 30
Fault clearing procedure
    with Reprint on Fault disabled, 106
    with Reprint on Fault enabled, 108
Fault condition
    reprinting pages after, 105
Fault messages table, 110
Field service
    errors requiring, 105
Fonts, 25
Forms, 25
Front panel See Control panel, 29
Function keys
    CANCEL, 34
    CLEAR, 32
    DOWN, 34
    ENTER, 33
    NEXT, 34
    ONLINE, 31
    PAGE EJECT, 33
    PREV, 34
    SHIFT, 32
    TEST, 32
    UP, 34
Fuser unit cover glass
    cleaning, 79

G

Glass cover
    fuser unit cleaning, 79

H

Host interface specifications, 127

I

IGP / PGL Emulation, 24
IGP / VGL Emulation, 24
Impact Printer Emulation, 24
Important notice, 17
Intervals
    replacement consumables, 67
    replacement user responsibility, 67

J

Jams paper
    fanfold, 95
    in transport output section, 104
    near paper output section, 96
    near tractor, 95
JOB IN PROCESS
    status lamp, 30

K

Keys
    function, 29
Keys See Function keys, 29

L

Labels
    safety See Safety., 20

LCD See Liquid crystal display, 29
LINE SYNC
    status lamp, 29
LinePrinter Plus emulation, 24
Liquid crystal display (LCD), 29
Loading paper, 23
Location
    disk drives, 27
    power switch, 27
Log sheets maintenance
    level A, 120

M

Maintenance log sheets
    level A, 120
Maintenance schedules, 66
Manual conventions, 18
Memory requirements, 128
Message display
    See Liquid crystal display, 29
Message table
    error messages, 110
Messages
    error, 105
    service level clearing, 65
    system status, 105

N

NEXT
    function key, 34

O

ONLINE
    function key, 31
    status lamp, 30
Operator-correctable errors, 105
Operator’s panel See Control panel, 29
Output section
    transport
    paper jams in, 104

P

Page counts
    service level, 64
PAGE EJECT
    function key, 33
Pages
    reprinting after fault, 105
Paper
    loading, 23
Paper jams
    fanfold, 95
    in transport output section, 104
    near paper output section, 96
    near tractor, 95
Paper output section
    paper jams near, 96
Paper path diagram, 29
Paper specifications, 123
PCL5 Emulation, 24
Performance specifications, 126
PhoenixPage PCL5 Emulation, 24

Index

Photoreceptor drum
  disposal, 48
  replacing, 42
Physical characteristics, 129
Power switch
  location, 27
Powering On, 27
Precautions
  safety See Safety., 18
PREV
  function key, 34
Printer
  emulations, 24
  general information, 24
  powering on, 27
Printer diagnostics, 94
  offline, 94
  online, 94
Printer specifications
  electromagnetic interference, 128
  emulations, 128
  environment, 129
  host interfaces, 127
  memory requirements, 128
  paper, 123
  performance, 126
  physical, 129
  safety regulations, 129
Printronix LinePrinter Plus emulation, 24
Procedure fault clearing
  with Reprint on Fault disabled, 106
  with Reprint on Fault enabled, 108

R

Recharging
  developing unit See Replacing, developer, 52
Recommended vacuum cleaners, 63
Replacement intervals
  consumables, 67
  user responsibility, 67
Replacing
  photoreceptor drum, 42
  toner cartridge, 36
  waste toner bottle, 40, 42
Replacing developer, 52
Reprint on Fault
  disabled fault clearing procedure, 106
  enabled fault clearing procedure, 108
Reprinting
  errors requiring, 105
Reprinting pages after fault, 105

S

Safety
  label locations, 20
  notices, 17
  precautions, 18
Safety regulations, 129
Schedules
  maintenance, 66
Service levels
  messages clearing, 65
SHIFT
  function key, 32

Specifications printer
electromagnetic interference, 128
emulations, 128
environment, 129
host interfaces, 127
memory requirements, 128
paper, 123
performance, 126
physical, 129
safety regulations, 129
STAND BY
status lamp, 30
Status lamps, 29
FAULT, 30
JOB IN PROCESS, 30
LINE SYNC, 29
ONLINE, 30
STAND BY, 30
SYS AVAIL, 30
Switches See Function keys, 29
SYS AVAIL
status lamp, 30
System status messages, 105

T

TEST
function key, 32
Toner bottle waste
replacing, 40, 42
Toner cartridge
replacing, 36
Tractor
paper jams near, 95
Transport output section
paper jams in, 104

U

UP
function key, 34

V

Vacuum cleaners
recommended, 63

W

Waste toner bottle
replacing, 40, 42

Index

PRINTRONIX, INC.
14600 Myford Road
P.O. Box 19559
Irvine, CA 92623-9559
Phone: (714) 368-2300
Fax: (714) 368-2600
Technical Support: (714) 368-2686

PRINTRONIX
Nederland BV
P.O. Box 163, Nieuweweg 283
NL-6600 AD Wijchen
The Netherlands
Phone: (31) 24 6489489
Fax: (31) 24 6489499

PRINTRONIX Schweiz GmbH
42 Changi South Street 1
Changi South Industrial Estate
Singapore 486763
Phone: (65) 542-0110
Fax (65) 543-0220

Visit our website at:
www.printronix.com

171639-001B